Roles of Sustainability-Driven Entrepreneurs in Evolution of Socio-technical Systems: Two Case Studies in New Zealand

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ABSTRACT

Socio-technical systems are challenged by sustainability problems that emerge from multifaceted situations incorporating social, cultural, institutional, and technological aspects. These situations are described as 'wicked problems' where any action results in new circumstances, requiring further consideration, making those systems path-dependent. Hence, a better understanding of the dynamics of such changes is required to foster sustainability transitions and avoid lock-ins in the status quo.

Multiple actors, fulfilling a range of roles that vary over time, are involved in these dynamic transitions. Entrepreneurs, as one category of these actors, play a significant role for creation of variations. They introduce new practices that depart from the established norms in socio-technical regimes. Among different types of entrepreneurs, sustainability-driven entrepreneurs initiate new practices that address the complexities associated with social and environmental issues. Yet, current understanding of interactions between sustainability-driven entrepreneurs and their socio-technical system context is underdeveloped.

To address this deficiency, this research builds upon previous sustainability-driven entrepreneurship literature and investigates the roles and strategies that sustainability-driven entrepreneurs have in socio-technical transitions. The research employs two embedded qualitative case studies in the retail sector and the wine industry in New Zealand to access applicable entrepreneurs and appropriate sources of information for this investigation. Among different streams of research in sustainability transition, Multi-Level Perspective (MLP) and Strategic Niche Management (SNM) are used to contextualize entrepreneurial actions and explain the dynamics of niche development, while Evolutionary Theory of Organizational Change is used to interpret interactions among various actors at the micro level. The findings contribute to the literature via four theoretical propositions.

First, the research introduces a model for niche development focusing on sustainability-driven entrepreneurs' roles, starting with entrepreneurial intentions and establishment of new organizational forms and continuing through a cyclic process between internal legitimacy of these organizational forms and their external validation, diffusion, and

consensus. Second, the research suggests that sustainability-driven entrepreneurship is a hybrid phenomenon that emerges through a bricolage process where associated business models move between conforming to current institutional logics and/or taking an opposing position by pursuing a sustainability logic. Third, this research argues that sustainability-driven entrepreneurs may take strategic actions to build their new niches and gain cognitive and sociopolitical legitimacy. Their roles and strategies include system-building and institutional entrepreneurship, knowledge-sharing and collective learning with like-minded actors, and role-modeling for skeptical stakeholders. While most of these roles have been discussed in previous entrepreneurship literature, information sharing with likeminded businesses and role modeling for skeptical actors were identified as unique for sustainability-driven entrepreneurs. Fourth, this research shows that various factors such as types of innovation (technical vs. social; procedural, systemic, or mindset) and the structure of the context (diversity, complexity, and level of trust), along with wider trends of change at the landscape level, mediate the effectiveness of entrepreneurial strategies.

To further advance knowledge in this field, future research should re-conceptualize the dynamic relationship between innovation (in all its forms) and its context due to the multifaceted nature of sustainability.

PREFACE

The topic in this thesis originated from my personal concerns and was instigated by my life experience in the years preceding my journey as a PhD student. Living and growing up in a developing country that was capable enough to buy and employ technologies for many purposes, I realized that adopting this approach for development might not necessarily result in a better quality of life. While there is a need for economic progress to generate income, and create financial assets, the adoption of new technologies can lead to conflict within the society if these new technologies are not suitably integrated. Such a separation between social and technological evolution has created fundamental social and environmental degradation that will require major changes in all dimensions of societal systems to alleviate and remediate. Established social constructs, cultural norms, and institutions in the society need to change in order to allow the society to benefit from the technological changes. I was always curious to know how individuals could address such systemic problems through their actions and everyday practices.

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PUBLICATIONS AND RESEARCH OUTPUTS

Some of the research described in this thesis has undergone peer review and has been published in, or at the date of this printing is being considered for publication in academic journals, books, and conferences. Also, data concerning additional research topics peripheral to the focus of this thesis were collected at the same time, and have resulted in publications related to this thesis. This notice serves to indicate that certain parts of the material presented here have already been described by the author in the literature, and some parts are therefore subject to copyright by either publishers or the author outside this volume. All of the work was conducted for and written for this thesis in the first instance; publications derived from it are consequential to work on the thesis, which cannot be seen as a compilation of previously completed separate studies. Coauthors in all instances are the researcher's thesis supervisors.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1 ***INTRODUCTION***

To be sure, the transition to a sustainable world will not be easy. Gradual changes will not be enough to turn the tide; we also need some major breakthroughs. The task seems overwhelming, but is not impossible. From our new understanding of complex biological and social systems we have learned that meaningful disturbances can trigger multiple feedback processes that may rapidly lead to the emergence of new order (Capra, 2002, p. 267).

'Sustainability' is a contested concept (Laine, 2010, p. 4) and people with diverse expertise and a variety of interests have different opinions about it (Waddock, 2013). This variety of perceptions makes this concept difficult to define and complicated to pursue (Glavič & Lukman, 2007). Sustainability is neither a specific state nor a specific destination. It is a journey (see Section 2.1.2.4) towards integration and integrity within and between societies, and among people and the natural world (Gladwin, Kennelly, & Krause, 1995). While current trends of development have created gaps among different nodes of this integrated web, revising this methodology is becoming an urgent need for our current situation (Levin, Cashore, Bernstein, & Auld, 2012; Waddock, 2013). As mentioned in the starting quote of this chapter, this journey happens through long-term fundamental changes along various dimensions of societal systems[1] (Markard, Raven, & Truffer, 2012). These fundamental changes mean that in order to create environmentally-friendly and socially-accepted inclusive forms of production and consumption, activities in the societal system need to be altered in a co-evolutionary manner (Coenen, Benneworth, & Truffer, 2012; Geels, 2002).

Societal systems consist of actors interacting with technologies and infrastructures (Waddock, 2013). These interactions are led by the norms and institutions in those systems. Actors may stabilize the norms or may put effort to change and create new standards and models (Giddens, 1984; Walley & Taylor, 2002). The sustainability of these systems is highly dependent on the integration of the norms and institutions, with the wider environment, embedding those systems (Berkes & Folke, 1998). Among different societal groups, business actors are influential in the creation of new norms and reconstruction of older norms. They can play a significant part in co-evolutionary changes (see Section 3.1) that are necessary for movement towards sustainability (Hall, Daneke, & Lenox, 2010; Schmidpeter & Weidinger, 2014). Sustainability-driven entrepreneurs, further defined and discussed in Section 2.1.2.3, are among the business actors who have the intentions to carve new forms which are believed to be more aligned with long term sustainability of systems (Sedmak, 2014). They identify and exploit opportunities to create new viable alternative models for current trends (Schaltegger & Wagner, 2011). They

[1] "A system is a set of two or more elements of ***any*** kind; for example, concepts (as in the number system), ideas (as in a philosophical system), objects (as in a telephone system or organism), or people (as in a society)"can (Ackoff, 1974, p. 3).

facilitate the change by creating new norms and institutions, which may find wider acceptance and be substituted for the older ones at societal level. Their effort may initiate co-evolutionary changes that alter the societal systems towards a more sustainable future (Hall et al., 2010; Hockerts & Wüstenhagen, 2010; Schaltegger & Wagner, 2011).

Investigating the dynamics of such changes, with a focus on the roles and strategies that sustainability-driven entrepreneurs play in those processes is the main problem of this research (see Section 2.3). The research investigates sustainability-driven entrepreneurs and their interactions with other actors, within their business environment, to bring about a better understanding about the formation of a more-sustainable niche. It also considers how innovations may experience breakthroughs to become wider norms and institutions in societal systems and how sustainability-driven entrepreneurs play roles in such diffusions. The rest of the Introduction Chapter is organized in three main sections: In the first section the background literature and a brief explanation are presented and the research questions are introduced. The second section introduces the method, followed by the scope of the research that includes brief information about the utilized cases, assumptions that have been made, and limitations that are imposed on this research. In the final section, an outline of the thesis is presented.

1.1 Background Literature and Research Questions

Sustainability-driven entrepreneurs provide solutions for social and environmental degradation (Belz & Binder, 2017; Hall et al., 2010). As further explored in Chapter Two, research in this area initiated because previous conceptualization of actors as social and environmental entrepreneurs could not present a comprehensive picture of businesses in real contexts (see section 2.1.2). This area of research intends to integrate the complexities of social and environmental dimensions and can be defined as:

> *… the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society (Shepherd & Patzelt, 2011, p. 137)*

Researchers from different disciplines such as management (Spence, Gherib, & Biwolé, 2011; Walton & Kirkwood, 2013), geography (Gibbs & O'Neill, 2014), and economics (Hockerts & Wüstenhagen, 2010) have investigated these actors with diverse interests.

Hence, literature in this area could have different foci, such as characteristics (Lans, Blok, & Wesselink, 2014), definitions and typologies of entrepreneurs (Schaltegger & Wagner, 2011), process of business development (Parrish, 2010), opportunity recognition and exploitation (Patzelt & Shepherd, 2011), and entrepreneurs as change makers (Gibbs & O'Neill, 2014; Walton & Kirkwood, 2013).

As further discussed in Section 2.2, sustainability-driven entrepreneurs may stand along the spectrum between innovative people who find market failures and take actions based on those opportunities to gain financial profit, and passionate people who are motivated to change the norms and institutions in their business environment (Cohen & Winn, 2007; Parrish, 2008; Schaltegger & Wagner, 2011). While the first group is necessary to solve some of the problems associated with social and environmental degradation, they act mainly based on current socio-economic norms and do not question the fundamental assumptions behind the present economic systems (Gibbs, 2006). The second group of entrepreneurs, who employ practices that are based on different philosophical assumptions, question the mindsets in current systems and may put efforts to change the norms and institutions to make it more aligned with their new social and environmental goals (Parrish, 2010).

Considering sustainability-driven entrepreneurs as change-makers, literature suggests that there is not enough understanding about their roles and strategies as change makers (Gibbs, 2006; Gibbs & O'Neill, 2014; Keskin, Diehl, & Molenaar, 2013; Walton & Kirkwood, 2013). Entrepreneurship literature may draw a heroic image of these people without considering the contextual factors that influence their success or failure (Dowling & Pfeffer, 1975; Gibbs, 2006; Schumpeter, 1934; Vasi, 2009), or it may take the opposite approach and consider these people as adaptive actors who do not have power to change the selection criteria and their failure and survival is dependent on how they fit their business environment (Carroll & Hannan, 2000; DiMaggio & Powell, 1991).

Recent literature suggests that more contextual research is necessary to explore how these interactions work (Aldrich & Martinez, 2001; Aldrich & Ruef, 2006; Gibbs & O'Neill, 2014; Walley & Taylor, 2002), how their actions may bring about change in their business environment, and how they are constrained by different socio-economic criteria imposed by the wider system (Aldrich & Martinez, 2001). This research investigates these complexities to explain how sustainability-driven entrepreneurs employ strategies and

play roles to alter the trends in their business environment towards a more sustainable state of production and consumption, and how they are influenced by socio-economic factors in their context. To attain this research objective, this project will address the three following research questions:

1. What are the roles and strategies that sustainability-driven entrepreneurs use to facilitate wider systemic changes?
2. What are the key factors that influence sustainability-driven entrepreneurs' actions for systemic changes?
3. What are the main interactions between sustainability-driven entrepreneurs and other actors?

Few studies have investigated the interactions between sustainability-driven entrepreneurs and the business environments in which they operate, in order to understand their role in the process of change (Gibbs, 2006; Gibbs & O'Neill, 2014; Keskin et al., 2013; Klein Woolthuis, 2010; Parrish & Foxon, 2006; Walton & Kirkwood, 2013). For example, Gibbs (2006) investigates how entrepreneurship is important in transitioning towards sustainability using ecological modernization (Spaargaren & Mol, 1992) as a theoretical framework. He examines how individual entrepreneurs can be linked to their wider social and economic context, arguing that focusing on the entrepreneur as a person stems from the individualistic view of capitalism. This generates a heroic vision of the entrepreneur, while neglecting the role of the surrounding environment.

In another research, Parrish and Foxon (2006) introduce a co-evolutionary framework to investigate how sustainability-driven entrepreneurs challenge lock-ins of existing technologies and institutional structures by developing innovative business models, featuring complex (co-evolutionary) interactions between businesses and their environments. Aligned with this trend, De Clercq and Voronov (2011) introduce a conceptual model that shows how wider effects of sustainability-driven entrepreneurship are outcomes of an interplay between internal and external legitimacy of sustainable enterprises. Motivated sustainability-driven entrepreneurs put in effort to create legitimate business models, yet, their survival and wider influence depends on their external legitimacy.

In this regard, some authors (Choi & Gray, 2008b; Gibbs & O'Neill, 2014; Keskin et al., 2013; Walton & Kirkwood, 2013) explain that sustainability-driven entrepreneurs are influential in changing their business environment by actively addressing social and environmental concerns through their services and products, and developing legitimate new identities in their business environment. They show that sustainability-driven entrepreneurs challenge the dominant patterns in their sector by espousing different business models featuring a strong commitment to their environmental values. For example, Gibbs and O'Neill (2014) describe sustainability-driven entrepreneurship as a fluid and dynamic concept, with associated businesses moving along a spectrum between so-called 'green' and 'conventional' models, which enables them to pursue their sustainability goals while maintaining their viabilities. They argue that further research on related topics such as socio-technical transition and especially Multi-Level Perspective (MLP), needs to consider this complexity and diversity.

Following trends of research, and to investigate sustainability-driven entrepreneurs in their context, 'Sustainability Transition' frameworks are employed in this thesis. 'Sustainability Transition' investigates long-term fundamental changes in socio-technical systems. Socio-technical systems are defined as a network of actors (individuals, organizations, and institutions) who practice around a dominant technology or knowledge (Elzen & Wieczorek, 2005). This literature employs a systemic perspective for investigation by considering different dimensions of change at multiple levels and among a diverse range of actors (Lachman, 2013; Markard et al., 2012). This enables the researcher in this thesis to contextualize entrepreneurial actions and generates a more comprehensive picture of the processes of change and entrepreneurial interactions.

Main streams of research in Sustainability Transition literature are 'Multi-Level Perspective' (MLP), 'Transition Management' (TP), and 'Strategic Niche Management' (SNM) (Lachman, 2013). Transition management provides a reflective governance platform to understand changes at different levels and propose policies and tactical strategies to achieve specific goals (Kemp, Loorbach, & Rotmans, 2007). The Multi-Level Perspective investigates transitions retrospectively to develop theoretical knowledge and explains future transitions based on previous findings (Geels, 2002). Strategic Niche Management specifically investigates the dynamics among the actors at niche level in order to understand how niches are formed and stabilized (Schot & Geels, 2007).

Literature in this area is further discussed in Chapter 3 . The thesis justifies the usage of above-mentioned lenses to offer a better understanding of entrepreneurial actions and their wider influences in their business environment.

The questions aim to identify the strategies that sustainability-driven entrepreneurs are using to form a strong niche and facilitate change in their socio-technical system towards their social and environmental objectives. Sustainability Transition is a multidisciplinary area of research that can be combined with other theoretical frameworks to bring about a better understanding of different aspects of change (Lachman, 2013; Safarzyńska, Frenken, & van den Bergh, 2012). As this research investigates interactions at the micro level and among entrepreneurs and other actors to describe emerging criteria at the macro level, Evolutionary Theory in Organizational Change is a useful framework for this investigation. Evolutionary Theory explains how organizational forms evolve and investigates how new forms of organization find cognitive and sociopolitical legitimacy (Aldrich & Ruef, 2006; Fiol & Romanelli, 2012).

Evolutionary Theory considers organizational changes as emerging phenomena at different levels of (a) organizations, (b) populations, and (c) communities, taking place through different stages of variation, selection, retention, and struggle (Aldrich & Martinez, 2010). The combination of Sustainability Transition and Evolutionary Theory enables the researcher to theorize how interactions at micro levels may result in wider changes at the system level. While Sustainability Transition could explain the dynamics that connect the actors' level to emerging characteristics at the regime level, the application of Evolutionary Theory helps clarify entrepreneurial roles in the creation of a strong niche and explains the logic behind their actions. To gain access to appropriate information, a qualitative case study approach informed by Grounded Theory procedures is used for this investigation; this is explored further in the following section.

1.2 RESEARCH DESIGN

To conduct this research, an embedded case study research design is employed (Yin, 2014) to investigate sustainability-driven entrepreneurs in two different contexts. This is further explored in Section 4.4. The embedded case study approach is useful for situations where a study looks at different levels of a phenomenon in its natural settings (Yin, 2014).

Qualitative data is used to capture the contextual characteristics of the situations (Baxter & Jack, 2008). The main method of data collection is semi-structured interviews while other sources of data are used to find a more comprehensive picture about the cases (Charmaz, 2006; Lincoln, Lynham, & Guba, 2011). Since the case study approach does not offer a systemic procedure to handle and analyze large amounts of qualitative data, Grounded Theory procedures are used to address this issue (see Section 4.5.3). The outcomes of the coding process, informed by Grounded Theory, are used to present the findings (Charmaz, 2006).

The chosen cases are from two different contexts in New Zealand: (1) the retail sector and (2) the wine industry. These choices were made because they represent key economic sectors and the findings can be expanded to other similar areas. The wine industry simultaneously represents the agriculture sector and processing industries. Further, the wine industry has long been an area of concern among both practitioners and researchers with respect to issues such as chemical use, food security, and inefficient use of energy. The retail sector, on the other hand, bears relevance to most industries where any variation in one aspect may induce change in other parts of supply chains and throughout other socio-technical systems. These reasons are further explored in the initial sections of Chapter Five and Chapter Six where the results for these case studies are presented.

Different emphases about social and environmental dimensions in the two case studies furnish an appropriate context for comparison along these two dimensions. 'Sustainability' as a concept is not only contested, but its definition also varies by era and local perceptions; thus, identifying sustainability-driven entrepreneurs for this research was clearly context-dependent. With those caveats and stated intentions, in both sectors individuals were identified who were addressing important social and environmental issues while maintaining financial viability. The sustainability-driven entrepreneurs in the wine industry prioritized environmental aspects, while those in the retail sector emphasized social dimensions. This diversity presents a richer picture of the topic of research and clarifies the similarities and differences between the two cases.

The process of data collection was initiated by purposeful sampling in the respective sectors. The first interviewees were individual entrepreneurs who had founded their own businesses and had socially- and/or environmentally-friendly practices (based on knowledge at that time) from the commencement of their ventures. They were financially

viable businesses and were considered pioneers in their sector or industry. Geographically and institutionally, the research is restricted to the country of New Zealand and to the institutions, rules, and regulations of New Zealand. Moreover, in each case study the researcher has confined the research design to a more specific context to collect more precise and focused data. The wine case study concentrates on two wine-producing regions in New Zealand, Nelson and Marlborough. In the retail sector, the research is mainly focused on retailers in the city of Dunedin.

Other interviewees consisted of different actors, including individuals, organizations, companies, NGO's, and third-party authorities, who were involved or influential, one way or another, in entrepreneurial actions. Most of the interviews were conducted face-to-face in the working environment of the interviewees, enabling the researcher to establish a better sense of their interactions and work. However, there were occasions where face-to-face interviews were not possible, in which case Skype and telephone conversations were used. Graphical representations of previous findings were used during the interviews to discuss the situation and discover more details about emerging themes. These are further explained and discussed in Section 4.5.2.

Primary data was collected during one year of this PhD project. The collected data includes retrospective events in the sector or industry. Consequently, based on the stage of development and the history of entrepreneurial actions, the number of events and richness of data might vary for different new practices. This notion constrained the research as these entrepreneurs may not be successful in their strategies and these new ideas may never successfully become the dominant trend in their sector or industry. Moreover, the timeframes for these investigations are short compared to timespans necessary for transitions, and the collected information may be compared to a snapshot in the process of change.

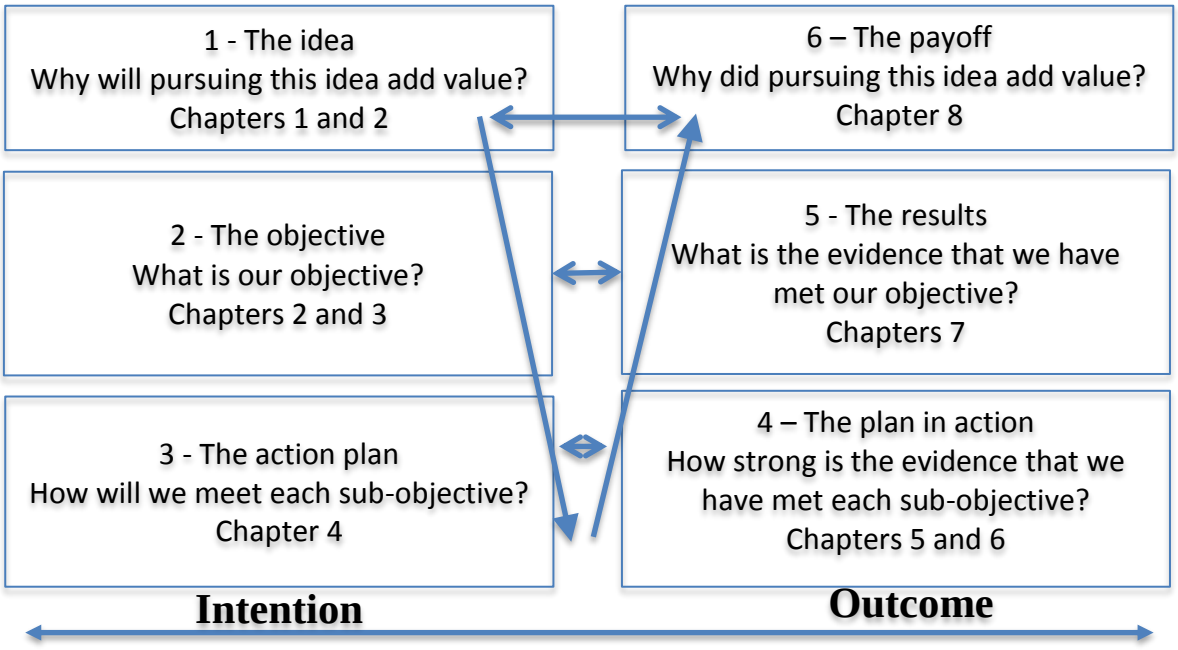
Interviews were recorded and transcribed by the researcher after each individual interview (Baxter & Jack, 2008). NVivo (QSR International Pty Ltd. Version 10 software) was used as a database management software to facilitate the coding procedures (see Section 4.5.3.2). Techniques of Grounded Theory were used for initial coding, focus coding, and theoretical coding. The coding process was informed by the literature from Strategic Niche Management and the results were used to develop theoretical contributions (see Section 4.5.3.1). The outcomes from theoretical coding formed the

results based on the evidence in this research, which are explained in the technical language of the theoretical framework in this research (Charmaz, 2006). The results chapters (Chapters 5 and 6) emerged through iterative cycles of coding, comparison with literature, comparison between cases, and writing. The outcomes of the above-mentioned procedures are presented in two distinctive chapters (Chapters 7 and 8). This outline is further discussed in the following section.

1.3 Outline of the Thesis

This thesis is presented in eight chapters. It follows Sheffield's V-model for systemic knowledge development (Sheffield, 2005), shown in Figure 1-1. This initial chapter started with a discussion of the background and context of this study, explained the importance of this area of research, and described how the findings arising from this research would fit with the existing body of knowledge. It then explained how the situation is approached and described the research plan and theoretical framework, followed by the overall outline of the research.

Figure 1-1 The structure of the research



Source: Based on (Sheffield, 2005, p. 96)

Chapter Two reviews the literature on social and environmental entrepreneurs and the emerging field of 'sustainability-driven entrepreneurship'. It locates a research gap in this literature and explains how this research adds to the body of knowledge in sustainability-driven entrepreneurship. The focus of the investigation in this chapter is sustainability-

driven entrepreneurs as change-makers. The chapter analyses the literature in this area and develops the research questions based on previous studies.

Chapter Three examines the literature on Sustainability Transition and Evolutionary Theory of Organizational Change as appropriate frameworks or theoretical lenses for this investigation. It shows how Strategic Niche Management and Multi-Level Perspective are used as the overarching structure to contextualize entrepreneurial actions and how literature on Evolutionary Theory is used to explain the interactions among actors.

In Chapter Four, the method for addressing the research questions in this research is designed and the philosophical assumptions behind this investigation are explained. The chapter explains the roadmaps used to answer the research questions and justifies the criteria for evaluation. It explains how embedded case studies informed by procedures in Grounded Theory are used to investigate the situations, collect relevant data, analyze data, and present them in a systematic way.

Chapter Five and Chapter Six contain the results from the two case studies. Chapter Five shows how the chosen organic and Fairtrade retailers, in New Zealand's context, address their social and environmental goals and explain their strategies for wider changes in their sector. Chapter Six investigates the interviewed organic, biodynamic, and CarboNZero-certified companies in the wine industry and shows how environmental entrepreneurs in this industry may initiate wider changes.

Chapter Seven connects the findings with the theoretical lens used in this study. It shows how the results are aligned with the literature on sustainability-driven entrepreneurship, Strategic Niche Management and Evolutionary Theory, and how the findings contribute to the extant literature in these areas of knowledge with new suggestions. It introduces a model for niche development, focusing on entrepreneurial roles and strategies, which can be checked in future research for further developments and more quantitative and generalizable hypothesis.

Chapter Eight concludes the research and summarizes the research contributions. It connects the findings with research questions discussed in the early chapters of the thesis. Finally, the chapter discusses the research limitations and implications, and suggests some research problems for future studies.

Chapter 2 ***REVIEW OF LITERATURE***

Entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are being held up as a panacea for many social and environmental concerns. However, there remains considerable uncertainty regarding the nature of entrepreneurship's role and how it may unfold (Hall et al., 2010, p. 439).

Extant literature argues that current trends of economic development based on philosophies such as capitalism, ecological modernization, eco-efficiency, and socio-efficiency (which are usually associated with business practices such as Corporate Social Responsibility and incremental improvements), do not provide sufficient solutions for sustainability issues (Anderson, 1998; Beveridge & Guy, 2005; Dyllick & Hockerts, 2002; Keijzers, 2002; Klewitz & Hansen, 2014; Parrish & Tilley, 2010). As expressed in the quote opening this chapter, sustainability-driven entrepreneurship is seen as an appropriate means to address these problems and facilitate a shift from current norms in societal systems via radical innovation (Anderson, 1998; Del Baldo, 2014; Isaak, 2002; Keijzers, 2002; Schaper, 2002; Taylor & Walley, 2004).

This chapter examines the literature on 'sustainability-driven entrepreneurship' as the foundation of this study and explains its associations with social, environmental, and conventional entrepreneurship. The main purpose of this literature review is to evaluate existing knowledge and justify this new study in related fields (Cutcliffe, 2000). While sustainability-driven entrepreneurship literature covers a diverse range of research, this review focuses on the literature about change, considering these actors as facilitators of change, and identifies a number of gaps in existing knowledge (Glaser & Strauss, 1967). This literature review presents a full picture about the topic under investigation that represents related academic data-bases and covers an extensive range of publications.

The chapter starts by introducing the conventional entrepreneurship literature as the basis of sustainability-driven entrepreneurship, then expands on entrepreneurial outcomes, and investigates the literature on social and environmental entrepreneurship. In the section after the introduction, the chapter explains how these three concepts, i.e., conventional, social, and environmental entrepreneurship, have intersected to form 'sustainability-driven entrepreneurship'. The chapter, next, investigates the literature on sustainability-driven entrepreneurship and moves on to the focus of this research, i.e. sustainability-driven entrepreneurship as a facilitator of change. The chapter ends by highlighting some gaps in the literature, and developing the research questions of this thesis.

2.1 ENTREPRENEURSHIP

This section presents an overview of conventional entrepreneurship literature and different schools of thought in this field. It serves as the background context for the main topic of research in this thesis, i.e. sustainability-driven entrepreneurship, by explaining how outcomes of entrepreneurial actions may expand to include social and environmental features. It justifies the connections among conventional, social, and environmental entrepreneurship and clarifies how they are evolved to form sustainability-driven entrepreneurship.

The word 'entrepreneurship' originates from the French word 'entreprendre' meaning "*to take into one's own hands*" (Roberts & Woods, 2005, p. 46; Schaltegger, 2002). In the seventeenth and eighteenth centuries this word was associated with people who were creating higher economic value by using resources in an area with advanced productivity (Sullivan Mort, Weerawardena, & Carnegie, 2003). It is identified as the main driver of economic growth (Koh, 1996; Low & MacMillan, 2007; Santiago, 2013; Tilley & Young, 2009).

Organized theories of entrepreneurship were initiated in the eighteenth century based on Cantillon's work (Cantillon, 1931; Hébert & Link, 1989; Long, 1983; Solymossy, 1998; Tilley & Young, 2009). Cantillon was primarily interested in the economic aspects of entrepreneurship, rather than the personal characteristics of entrepreneurs (Hébert & Link, 1989), and defined this concept as any kind of self-employment (Long, 1983). In his opinion, entrepreneurs are risk-takers who tend to buy products/services at a certain price and thereafter sell at an uncertain price. Three major schools of thought are built on Cantillon's work: (1) the German tradition; (2) the Chicago tradition; and (3) the Austrian tradition; which are discussed in the following paragraphs.

The Schumpeterian (1883-1950) school of thought in the German tradition, argues that economic development takes place through market disequilibrium[2], where entrepreneurs and their innovations are the drivers for this disequilibrium (McKelvey & Holmén, 2006).

2 "*Equilibrium theories model market economies in a state in which participants have no incentive to change their present actions, as they are satisfied with the current combination of prices and quantities that are bought or sold*" (Eckhardt & Shane, 2003, p. 334)

Entrepreneurs not only develop new products, processes, or markets, but also can alter their entire industry (McKelvey & Holmén, 2006) and disrupt the supply/demand equilibrium. This process is known as 'Creative Destruction' (Schumpeter, 1934). In this perspective, entrepreneurs play a heroic role in the process of development (Chiles, Bluedorn, & Gupta, 2007; Schultz, 1975, 1980).

Another stream of research in entrepreneurship is the Chicago tradition, which is based on Knight's (1885-1972) ideas. Knight (1921) revisited Cantillon's definition of uncertainty and distinguished between risk, which is insurable, and uncertainty, which is not (Knight, 1921). Knight defined entrepreneurs as people who work under uncertainties and make decisions about an unpredictable future (Hébert & Link, 1989; Schultz, 1980). He shares the heroic vision of entrepreneurs with Schumpeterian school of thought.

The third school of thought is the Austrian tradition, based on Kirzner's (1930) ideas on entrepreneurship, grounded on the equilibrium theory in economics (Kirzner, 1997). Contrasting to the German and Chicago traditions, Austrian tradition entrepreneurs exploit opportunities from market disequilibrium to form a new equilibrium through their entrepreneurial actions (Hébert & Link, 1989). Austrian tradition entrepreneurs are not creators of opportunities; they discover existing opportunities, implying that the number of opportunities is restricted (Chiles et al., 2007) and that abilities to deal with disequilibrium could be taught through education (Hébert & Link, 1989; Schultz, 1975).

The three schools of thought, as discussed above, can be categorized based on their definitions of opportunity. They can be described as creative, locative, and discovery views (Alvarez & Barney, 2007; Cohen & Winn, 2007). On one hand, entrepreneurial opportunities do not exist objectively in disequilibrium theories; on the other hand, equilibrium theories represent entrepreneurs as actors, who are not able to exploit opportunities that have different values from current routines (Alvarez & Barney, 2007; Shane & Venkataraman, 2000). In the former entrepreneurial opportunities are social constructions which find meaning only with the presence of entrepreneurs (Alvarez & Barney, 2007). Equilibrium and disequilibrium perspectives can complement each other, which means after a disruption by Schumpeterian entrepreneurs, Kirznerian entrepreneurs make a new state of equilibrium (Chiles et al., 2007).

Discussions among different schools of thought have resulted in different definitions and foci of research in the field of entrepreneurship (Gartner, 1990; Rauch, Wiklund, Lumpkin, & Frese, 2009; Sharma & Chrisman, 2007). Table 2-1 shows some of the definitions of 'entrepreneurship' in the literature (selected from those listed in Low and MacMillan (2007)). Most of the definitions consider certain aspects of this concept and do not represent a comprehensive image (Low & MacMillan, 2007); hence, there is no consensus on one definition (Bygrave & Hofer, 1991; Mitton, 1989).

Table 2-1 Common definitions of entrepreneurship

Researcher	Definition
Schumpeter (1934, p. 66)	"Carrying out … new combinations"
Knight (1921)	Ability to distinguish between risk and uncertainty and to predict the future
Kirzner (1973)	Ability to identify market failures and imbalances; associated with the concept of arbitrage
Gartner (1988, p. 47)	"Entrepreneurship is the creation of organization"
Shane and Venkataraman (2000, p. 218)	"… study of sources of opportunities; the processes of discovery, evaluation, and ex-ploitation of opportunities; and the set of indi- viduals who discover, evaluate, and exploit them."

Echoing Table 2-1, definitions of entrepreneurs vary from innovative people to people who merely form new organizations, whether imitative or creative. Nevertheless, more recent entrepreneurship thinkers, such as Lachmann and Shane and Venkataraman (Lachmann, 1986; Shane & Venkataraman, 2000; Vaughn, 1992), emphasize innovation and consider an economic system as existing in a state of continuous disequilibrium generated through entrepreneurial actions, where entrepreneurs combine and recombine resources to create these new arrangements. This perspective extends the subjectivity of entrepreneurial activities, moving beyond individuals' interpretations towards future expectations via creative imagination. This creative imagination enables entrepreneurs to think outside the box (Chiles et al., 2007).

Correspondingly, Drucker integrates Schumpeterian economics with management science and underlines innovation in entrepreneurial activities. Innovation enables entrepreneurs to create a new combination of resources and values. Hence, entrepreneurship entails doing something different, and not doing something better (Drucker, 1984; Shane &

Venkataraman, 2000). Such notions, grounded in innovation and creation, reflect suitable perspectives for this research, which considers entrepreneurs as actors who create a new future through their actions, using Drucker's definition: "*The effort to create purposeful, focused change in an enterprise's economic or social potential*" (Drucker, 1984, p. 67).

Considering the above mentioned definition (Gartner, 1985) some innovative efforts may be undertaken by employees of established businesses, known as intrapreneurship or corporate entrepreneurship (Schaper, 2010; Sharma & Chrisman, 2007; Zu, 2014). For example, different forms of environmentally-friendly businesses have been defined as 'green businesses', which change practices after their foundation, and 'green-green businesses', which commence with environmentally-friendly goals (Anderson, 1998; Isaak, 1998, 2002; Levinsohn, 2013). Intrapreneurs have different goals and motives compared to entrepreneurs, and they may receive considerable amounts of expertise and assistance from their companies in order to discover and exploit business opportunities (Antoncic & Hisrich, 2001).

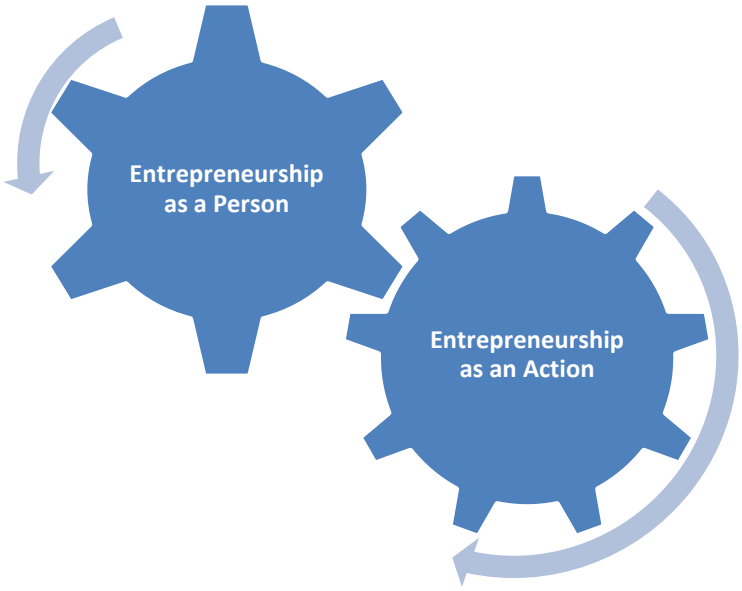
While companies of any size can contribute to sustainability objectives, it is easier for small-sized businesses to change mindsets, employ radical innovation, and integrate sustainability goals into their business practices (Santiago, 2013; Schaltegger & Wagner, 2011; Zu, 2014). Hence, newly-founded companies are more likely to depart from current well-accepted norms and induce the type of fundamental changes necessary in the case of sustainability issues (Keskin et al., 2013; Klewitz & Hansen, 2014; Schick, Marxen, & Freimann, 2002), As such, this thesis emphasizes entrepreneurship rather than intrapreneurship as the subject of study and investigates how entrepreneurial actions may offer solutions for social and environmental degradation, a perspective that warrants further explanation (Busenitz et al., 2003; Bygrave & Hofer, 1991; Chiles et al., 2007; Gartner, 1985; Low & MacMillan, 2007; Shane & Venkataraman, 2000)

2.1.1 Different Streams of Research in Entrepreneurship

Entrepreneurship research investigates the intersection of individuals, opportunities, modes of organizing, and environment (Busenitz et al., 2003; Gartner, 1985). To a degree, unclear boundaries between entrepreneurship research and management studies (Busenitz et al., 2003) challenge the legitimacy of entrepreneurship as an academic field (Bygrave & Hofer, 1991; Chiles et al., 2007; Shane & Venkataraman, 2000). Diverse views of entrepreneurship may emerge based on contradictory answers to the following two

questions: (1) What is the main role of entrepreneurs in the economy? (2) What are the characteristics of these people? (Kirkwood & Walton, 2010; Parrish, 2008). This diversity leads to the two main foci in entrepreneurship scholarship: the act of entrepreneurship, and entrepreneurs as persons, as shown in Figure 2-1 (Aldrich & Martinez, 2001; Gartner, 1988; Shane & Venkataraman, 2000).

Figure 2-1 Entrepreneurs as individuals or entrepreneurship as actions



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Among the above-mentioned foci of entrepreneurship literature, the latter emphasizes the characteristics and behaviors of entrepreneurs (Evans, 1970; Kirkwood & Walton, 2010; Koh, 1996; Lachman, 1980) and does not offer insight for understanding the processes and outcomes of entrepreneurship (Aldrich & Martinez, 2001; Bygrave & Hofer, 1991; Gartner, 1988), while the former investigates the entrepreneurial actions and their broader influences on the economy and business environment (Shane & Venkataraman, 2000). Since this thesis investigates how entrepreneurial actions may solve social and environmental problems, it primarily focuses on the entrepreneurial process rather than on entrepreneurs as individuals. Nonetheless, individual entrepreneurs exhibit unique behavioral and psychological aspects that inevitably interact with the entrepreneurial process, resulting in variations to that process. The focus in this research is on the process in general, but as it cannot ignore the impacts of individuality of the entrepreneurs, some of the aspects of their diverse backgrounds and motivations will be incorporated into the analyses.

The thesis reflects on entrepreneurial processes to address some of the shortcomings in this literature. The entrepreneurial process involves a variety of phases such as opportunity discovery, exploitation, and execution (Shane & Venkataraman, 2000). Some scholars add outcomes and consequences of opportunity exploitation to these dimensions, (Aldrich & Martinez, 2001; Parrish & Tilley, 2010; Zahra & Dess, 2001) where the main topic of research in this investigation can be positioned.

Early literature considers entrepreneurs as self-interested actors, who become involved in entrepreneurial activities for profit and restrict the entrepreneurial outcomes mainly to financial gain (Parrish, 2010; Schoonhoven & Romanelli, 2001; Wennekers & Thurik, 1999). This merely economic perspective has been criticized (Parrish, 2010; Thompson, Kiefer, & York, 2011; Tilley & Young, 2009), and it is argued that the scope of entrepreneurship can be expanded (Cohen, Smith, & Mitchell, 2008; Lumpkin & Katz, 2011; Thompson et al., 2011; Tilley & Young, 2009) to contribute to social and environmental aspects of societal systems (Cohen et al., 2008; Parrish, 2010; Pastakia, 1998; Schaper, 2010; Schlange, 2006a; Tilley & Young, 2009).

This notion has opened-up new contexts for research in entrepreneurship literature (Thompson et al., 2011) and is the main area of concern in this thesis. For example, studies such as social influences of entrepreneurs on the healthcare sector (Janssen & Moors, 2013), or environmental improvements in the construction industry as the outcomes of entrepreneurial actions (Klein Woolthuis, 2010), are among research that have investigated these features. These entrepreneurs, who consider the social and environmental aspects of development in their business goals, are included in this thesis for further investigation and discussed in the following sections.

2.1.2 Evolution of Entrepreneurship Research in Social and Environmental Dimensions

This section presents an overview of social and environmental entrepreneurship literature, as extensions to conventional entrepreneurship, and analyzes how sustainability-driven entrepreneurship evolves from these concepts.

2.1.2.1 Social Entrepreneurship

Social entrepreneurship was introduced as a concept in the 1980s (Choi & Majumdar, 2014; Dees, 2007) and crystalized in the 1990s (Parrish & Tilley, 2010; Waddock & Post, 1991). While different descriptions are provided for social entrepreneurship (Abbas &

Parbudyal, 2011), there is no commonly-agreed definition (Choi & Majumdar, 2014; Mair & Marti, 2006; Schlange, 2006a; Trivedi & Misra, 2015; Yitshaki & Kropp, 2015) and it has been regarded as a contested concept (Choi & Majumdar, 2014). Most research in this field is phenomena-driven, i.e. based on case studies, where diverse theories from a variety of disciplines are employed for explanations (Mair & Marti, 2006). This lack of consistency has threatened the legitimacy of this field (Choi & Majumdar, 2014; Trivedi & Misra, 2015) and resulted in different schools of thought and research foci (Dees & Anderson, 2006; Defourny & Nyssens, 2010). Research on (1) social value creation; (2) social entrepreneurs as individuals; (3) social entrepreneurship organization; (4) market orientation; and (5) social innovation (Trivedi & Misra, 2015) are considered the main streams in this literature.

Inconsistency in definitions of social entrepreneurship stems from this diversity in research topics (Mair & Marti, 2006). Nevertheless, all existing definitions tend to have a common ground where social entrepreneurs (1) deal with social issues which contributes to communities; and (2) create new arrangements and innovative methods which help gain resources and accomplish organizational missions (Dees, 2003; Gundry, Kickul, Griffiths, & Bacq, 2011; Schlange, 2006a; Trivedi & Misra, 2015; Zahra, Gedajlovic, Neubaum, & Shulman, 2009). In one of the broader definitions Zahra et al. (2009, p. 519) describe social entrepreneurship as:

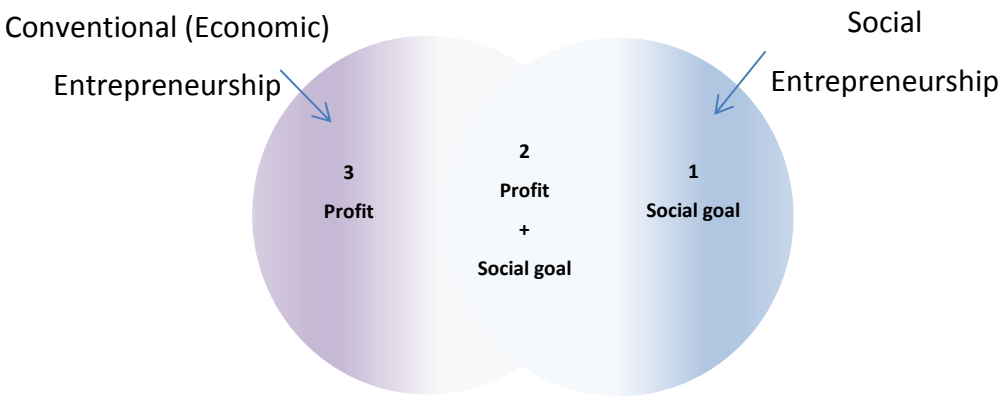
> *Activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner.*

Social entrepreneurs are considered as change agents (Dees, 1998; Gundry et al., 2011; Mair & Marti, 2006; Waddock & Post, 1991), in which the wider influence of their actions (for social change and solving social issues) depends on the entrepreneurs' perception about social issues and connections with their societal context (Mair & Marti, 2006; Trivedi & Misra, 2015). Hence, a better understanding about the relationships among social entrepreneurs, social issues, and societal context may help both entrepreneurs and policy-makers to make better decisions, form effective connections with salient stakeholders, gain access to scarce resources, and eventually obtain better results (Gundry et al., 2011; Lopolito, Morone, & Taylor, 2013; Mair & Marti, 2006). More contextual research, investigating entrepreneurs among their network, is required for this

purpose. As discussed later in this chapter, a similar approach is used in this research to investigate sustainability-driven entrepreneurs within their context.

Social ventures may span a continuum between philanthropy and self-interest (Belz & Binder, 2017; Corner & Ho, 2010; Dart, 2004; Dees, 1998; Parrish & Tilley, 2010; Peredo & McLean, 2006; Trivedi & Misra, 2015). As shown in Figure 2-2, businesses can vary from nonprofit, merely socially-driven entities (area 1) (Millar, Hall, & Miller, 2013), to profit-driven ventures that have competitive advantage in their social goals (area 2) (Dart, 2004; Mair & Marti, 2006; Martin & Osberg, 2007).

Figure 2-2 Relationship between social and conventional entrepreneurship



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This diversity implies that some balance between societal benefits and financial rewards is achievable and firms could aim for both concurrently (Dart, 2004; Trivedi & Misra, 2015). However, in many instances, economic outcomes of social enterprises are considered as a constraint rather than a goal (Dees, 2003; Mair & Marti, 2006; Schlange, 2006a; Yitshaki & Kropp, 2015; Zu, 2014) and many social entrepreneurs are considered as mission-driven rather than financially-motivated actors (Dean & McMullen, 2007; Dees, 1998; Defourny & Nyssens, 2010; Lumpkin & Katz, 2011; Trivedi & Misra, 2015; Yitshaki & Kropp, 2015), which may make them more persistent in pursuing their goals (Dees, 1998).

Correspondingly, literature on social entrepreneurship is more focused on non-economic gains for individuals or communities (Parrish & Tilley, 2010; Shepherd & Patzelt, 2011) and there is a need for further expansion to include the above-mentioned dimensions and move towards a more comprehensive understanding of social enterprises as a sustainable, (Zahra et al., 2009) self-sufficient entity (Zahra et al., 2009). This has resulted

in a new area of research, which is further explored in this chapter when sustainability-driven entrepreneurship is introduced. Environmental entrepreneurs are another type of entrepreneur, who have non-financial motivations and address environmental degradations in their business environment. These entrepreneurs are further discussed in the following section.

2.1.2.2 Environmental Entrepreneurship

The other group of entrepreneurs that incorporate non-financial goals in their enterprises is environmental entrepreneurs. Terms such as 'environmental entrepreneurship', 'eco-entrepreneurship', 'green entrepreneurship', and 'ecopreneurship' developed in the early 1990s (Beveridge & Guy, 2005; Gibbs, 2006; Kirkwood & Walton, 2010; Lumpkin & Katz, 2011; Melay & Kraus, 2012; Schaltegger, 2002; Schaper, 2010), when the demand for higher environmental quality emerged (Anderson, 1998; Schaper, 2002) and innovative business practices were proposed as a solution for environmental degradation (Jolink & Niesten, 2015; Schaper, 2010). Environmental entrepreneurs are drivers for environmental innovation (Beveridge & Guy, 2005) and can be defined as:

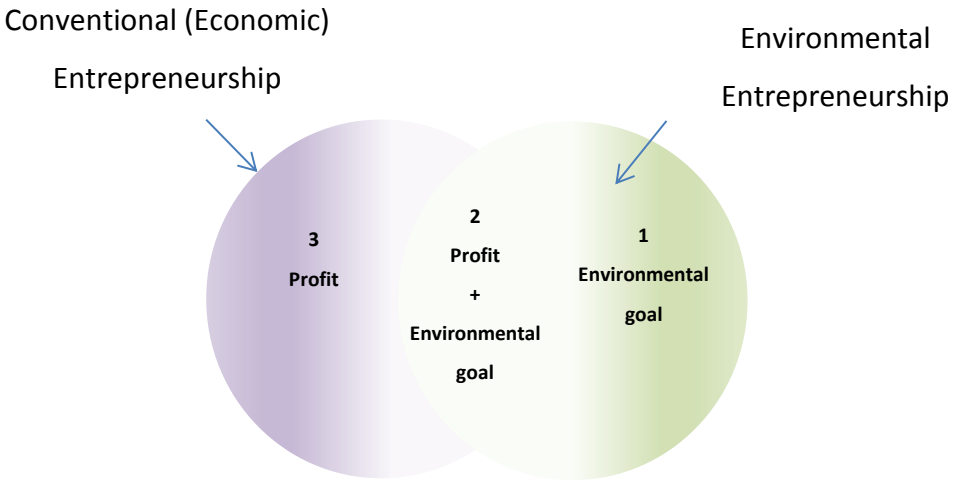
> *Social activists, who aspire to restructure the corporate culture and social relations of their business sectors through proactive, ecologically oriented business strategies (Isaak, 1998, p. 88).*

In contrast to literature on social entrepreneurship, studies on environmental entrepreneurship have mostly focused on profit-driven organizations, and environmental entrepreneurs are usually considered as people who combine environmental values with financial gain (Jolink & Niesten, 2015; Kirkwood & Walton, 2010; Zu, 2014). Their motivations are multifaceted and could be categorized into green values, earning a living, passion, being their own boss, and filling a gap in the market (Kirkwood & Walton, 2010). Literature on this topic is highly influenced by ecological modernization (Levinsohn, 2013) and application of concepts such as eco-efficiency (Côté, Booth, & Louis, 2006), which focuses on technological innovation with the assumption that existing sociopolitical philosophies and norms can address sustainability issues (Levinsohn, 2013).

The above-mentioned assumption neglects the complementary social and philosophical changes that are necessary to address sustainability issues and question the adequacy of this field of research. These social and philosophical changes demand fundamental alterations in the dominant norms of current societal systems. Hence, considering social dimensions along with environmental aspects may address this deficiency, which has

resulted in different typologies of environmental entrepreneurs that have been applied to public sector entities and nonprofit enterprises under the label of 'Social Ecopreneurship' (area 1 in Figure 2-3) (Pastakia, 1998; Schlange, 2006a). There is a handful of research looking at this concept through a non-profit lens, creating a connection between environmentally-friendly and socially-driven ventures. Non-profit startups that are primarily created to promote eco-friendly ideas, products, or technologies exemplify these environmental entrepreneurs (Pastakia, 1998).

Figure 2-3 Relationship between environmental and conventional entrepreneurship



Source: Author's own

Considering the above-mentioned discussion, at the simplest level, environmental entrepreneurs can be categorized into nonprofit and commercial ventures (Isaak, 2002; Kirkwood & Walton, 2010). Yet, more detailed typologies such as that of Taylor and Walley (2004) categorize environmental entrepreneurs, based on their motivations and structural influences on their business environment, into four groups: (1) ad-hoc, who comes across their green ideas accidentally; (2) innovative opportunist, who has a 'can-do' attitude and recognizes profitable opportunities; (3) ethical maverick, who is sustainability-driven, aims to develop alternative networks, and sets up an alternative-style of business; and (4) visionary champion, who is sustainability-driven and aims to change the world.

Likewise Schaltegger (2002), with a different lens but a similar focus of structural influences of environmental entrepreneurs, suggests a positioning matrix for proactive environmental actions. He introduces five different groups in this matrix as (1) alternative actors, (2) bioneers, (3) ecopreneurs, (4) environmental management, and (5)

environmental administration. He particularly distinguishes between 'bioneer' in eco-niches and 'ecopreneurs' in a mass-market. Schaltegger (2002) shows that while both have high priority for environmental values in their business goals, bioneers are more innovative and ecopreneurs are more adaptive to meet the market expectation and find market penetration, hence having more market impact on their business environment.

Yet, since these typologies do not consider the interactions between incumbents and new-comers, they do not present a comprehensive picture of environmental entrepreneurs. Schaltegger and Wagner (2011) expanded the previous typology (Schaltegger, 2002) for sustainable entrepreneurship and propose a better explanation of interactions between incumbent and newcomers to show how the relationship between entrepreneurs and larger firms tend to complement each other. They argue that larger firms have an advantage in incremental innovation and market penetration, while small companies excel in radical innovation at the niche market.

Similar to literature on social entrepreneurship, investigation of the literature and typologies emphasizes environmental entrepreneurs as change-makers (Schaper, 2010). However, they do not present enough explanation about the process of change and how these changes are intermingled with other dimensions of societal systems. As mentioned before, many aspects of such changes coevolve with social dimensions, and integration of this concept with social entrepreneurship is required. Overlaps and commonalities between them blur their boundaries and further research considering environmental entrepreneurs with socially-driven motivations is necessary.

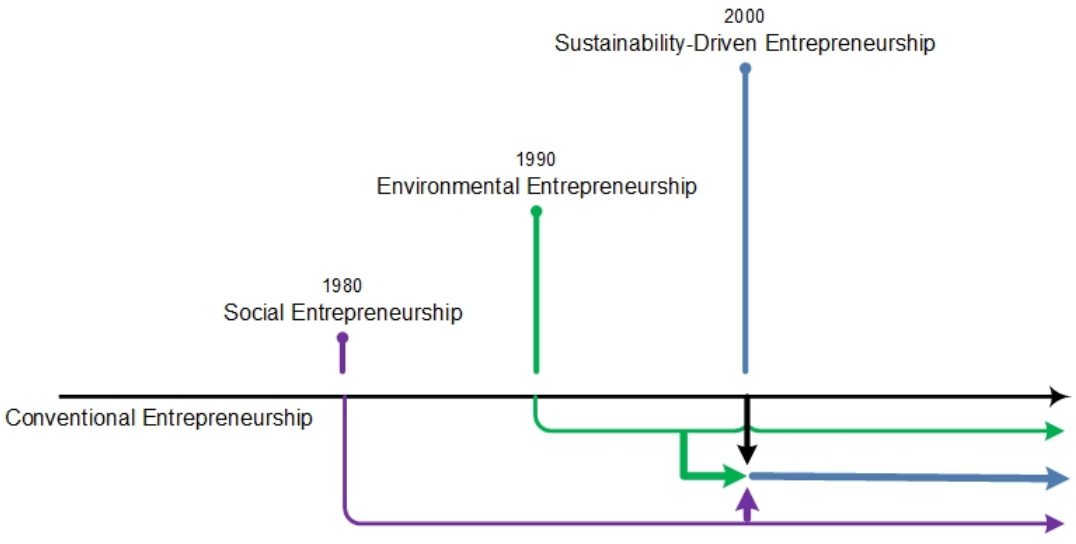
Summarizing the last two sections, social and environmental entrepreneurs address non-financial societal needs with different motivations. Yet, considering social and environmental entrepreneurs separately does not present a comprehensive image of businesses in real contexts as they usually employ a mixture of these goals (Belz & Binder, 2017; Cohen et al., 2008; Hall et al., 2010; Jolink & Niesten, 2015; Osburg, 2014; Parrish & Tilley, 2010; Pastakia, 1998; Schaltegger, Hansen, & Lüdeke-Freund, 2015; Schaper, 2010; Schlange, 2006a; Shepherd & Patzelt, 2011; Tilley & Young, 2009; Walley & Taylor, 2002). This may initiate from complexities associated with a contested concept such as sustainability (Holling, 2000; Waddock, 2013) and needs to be portrayed in the entrepreneurial literature. Hence, a combination of unclear boundaries between social and environmental dimensions, and the consideration of sustainability as an integration

of social, environmental, and economic values that move hand-in-hand have resulted in the development of a new concept called 'sustainability-driven entrepreneurship'. It is further explored in this chapter as the main topic of research.

2.1.2.3 Emergence of Sustainability-Driven Entrepreneurship

As discussed in the previous sections, initially entrepreneurship literature addressed social issues (in the 1980s), and then innovative businesses were identified as solutions for environmental degradation (in the 1990s). It was shown that these two concepts, separately, do not present an all-inclusive picture of such businesses in real contexts (Osburg, 2014). Hence, from the early 2000s researchers started to integrate the three main goals of sustainability into a coherent whole, under the umbrella of sustainability-driven entrepreneurship (Abrahamsson, 2007; Levinsohn, 2013; Lumpkin & Katz, 2011), to present a more comprehensive picture of real situations. Figure 2-4 shows the approximate time horizon of this evolution by comparing sustainable entrepreneurship to its components of conventional, environmental, and social entrepreneurship.

Figure 2-4 Evolution of entrepreneurship literature in social and environmental dimensions



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The growing number of such entrepreneurs in practice (Parrish, 2010; Zu, 2014), and the rising number of publications on this topic since 2002 (Jolink & Niesten, 2015; Levinsohn, 2013), emphasize the importance of research on this concept and underscore a need for

better understanding of entrepreneurial practices. However, since sustainability-driven entrepreneurship incorporates notions from entrepreneurship and sustainable development (Del Baldo, 2014; Parrish, 2008), integration of different schools of thought in entrepreneurship and sustainable development creates a wide range of perceptions about sustainability-driven entrepreneurship (Parrish, 2008; Schaper, 2010). Unclear definitions of sustainability, along with changing dimensions of social and environmental wellness, may add to this complexity (Tilley & Young, 2009). Therefore, it is necessary to justify how this research approaches the situation, what is the definition of a sustainable venture, and how this definition is connected to fundamental assumptions and worldviews towards sustainability in this thesis. For this purpose, the concept of sustainability is further explained, followed by definitions and literature in sustainability-driven entrepreneurship that position the research among various streams.

2.1.2.4 Different Approaches towards Sustainability

The idea of 'sustainable development' with its associated notion of 'sustainability', as it is recognized today, developed after the Second World War as a result of increasing awareness about the social and environmental impacts of economic growth (Hopwood, Mellor, & O'Brien, 2005; Keith, 1997; Laine, 2010). These social and environmental issues were linked with the development of capitalism and fast economic growth associated with industrial revolution (Hopwood et al., 2005). Due to a lack of sufficient attention, and continuing unsustainable trends in both production and consumption, addressing the issue of sustainability has become increasingly urgent (Lachman, 2013).

Scholars have proposed a myriad of definitions for this concept, influenced by their particular expertise and worldview (Giddings, Hopwood, & O'Brien, 2002; Glavič & Lukman, 2007; Hopwood et al., 2005). The corresponding adoption of diverse terminologies induces confusion (Glavič & Lukman, 2007) and results in a lack of consistency in analyses and application of theoretical frameworks in the outcomes of research (Giddings et al., 2002; Hopwood et al., 2005). This diversity of definitions and explanations of sustainability stems from various positioning of humans in relation to the natural environment.

Human beings may be positioned across the spectrum, from dominating the natural environment and valuing it as a resource for economic development to integrated part of

a global ecosystem similar to all other components promoting the inherent worth of living regardless of its value for human needs (deep ecology) (Hopwood et al., 2005). Considering this divergent, the most prominent definition of 'sustainable development' was promulgated in the Brundtland report, 'Our Common Future', as:

> *Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43).*

This report had a holistic view towards sustainability issues, and was developed by co-operations among diverse experts from different nations throughout the world. It described humans, humans' activities, and society as nested in within their natural environment (Giddings et al., 2002).

The above-mentioned diversity has also resulted in different approaches towards sustainability issues, from people with strong techno-centric approaches to those with strong eco-centric point of views. The latter group emphasizes the equality and redistribution of wealth, and redefine the relationship towards the natural environment by setting limits to growth and usage of natural resources, while the former emphasizes the status quo and application of technological innovation as possible solutions for social and environmental degradation (Gladwin et al., 1995). Nevertheless, three main groups are defined based on this diversity (a) status quo; (b) reformist (weak sustainability); and (c) transformative (strong sustainability) (Anderson, 1998; Gladwin et al., 1995; Hopwood et al., 2005; Milne, Kearins, & Walton, 2006).

As discussed earlier, sustainability issues need fundamental changes in different dimensions of societal systems such as leaders' mindset, perspectives towards growth, and the natural environment as a resource; which is not attainable by status quo or incremental improvements with reformist approach. Hence, this research employs a transformative perspective and considers sustainability-driven entrepreneurs as one of the actors who utilize radical innovation to initiate such transformations. However, complexities around sustainability make it difficult to translate this abstract concept to practical implications. The ambiguities around sustainability of systems may loosen the fundamental challenges that must be undertaken by actors, and degrade their actions to business as usual (Hopwood et al., 2005). These notions are further explored in the following paragraphs.

Sustainability (or unsustainability) is named a 'wicked problem' (Levin et al., 2012; Waddock, 2013), because it has multiple dimensions such as climate change (Fankhauser, 2013; Levin et al., 2012), extinction of species (Rands et al., 2010), poverty (Khavul & Bruton, 2013), and socio-economic inequity (Rogers, 2014), while involving diverse stakeholders and various perspectives (Waddock, 2011). 'Wicked problems', as commonly referred to in planning, policy-making, and system sciences, consist of ill-defined socially-complicated situations that involve many decision-makers with conflicting values and worldviews (Churchman, 1967; Rittel & Webber, 1973; Waddock, 2013; Weber & Khademian, 2008).

Systems dealing with such problems are called 'messes', indicating that different aspects of the system are highly intermingled such that solutions for these complicated situations would become too complex and cannot be resolved by changes in any single dimension (Ackoff, 1974); simple solutions could exacerbate the situation, resulting in more serious issues (Churchman, 1967). The complexity and messiness of sustainability issues are growing, as boundaries of organizations, sectors, and institutions intersect and intertwine (Waddock, 2013).

'Wicked problems' may have multiple solutions that are neither right nor wrong, but could be classified as more or less appropriate, considering different worldviews. Thus, there is no ultimate course of action with respect to these problems, and any attempted resolution will result in new situations and unintended consequences (Rittel & Webber, 1973). To address these problems, fundamental changes involving multiple features of systems are essential, where changes emerge through organizational engagements with diverse stakeholders (Ackoff, 1974; Waddock, 2013).

Consistently, solutions for sustainability challenges, as 'wicked problems', are therefore neither specific destinations nor definable states. They are about the processes of change and alteration in the directions of development (Kemp et al., 2007) that are often associated with a journey metaphor (Bonazzi, Gee, & Allen, 2001; Milne et al., 2006; Rowledge, Barton, & Brady, 1999); '*describing sustainability not as destination but as an ongoing adaptive learning process*' (Milne et al., 2006, p. 808).

Solutions for these problems take place in numerous small-scale changes that eventually may scale up and result in a more sustainable resilience system of production and

consumption (Mitchell, Curtis, & Davidson, 2012; Waddock, 2013). As such, entrepreneurial actions working in local setting that propose practical solutions for sustainability problems create a fertile ground for investigation of these co-evolutionary changes.

However, the journey metaphor for sustainability and its associated discourse in corporate sustainability reports is criticized by some scholars (Levy, 1997; Milne et al., 2006). This has happened because the journey metaphor, as used by some organizations, may cover the fundamental problems, linked by nature to those organizations, and legitimize their actions by using dialog associated with sustainability and sustainable development (Laine, 2010; Levy, 1997; Mitchell et al., 2012). For example, embracing the concept of sustainable development by Royal Dutch/Shell groups has been identified as paradoxical as there is an inherent tension between sustainability goals and what this business is trying to accomplish (Livesey, 2002).

This issue may initiate from an unclear vocabulary around sustainability, which legitimizes a diverse range of actions as solutions for sustainability problems (Laine, 2010), but they do not address the fundamental concerns initiating unsustainability of systems. Consequently, organizations may get seriously engaged in the discourse around sustainability, using the journey metaphor, but their actions may not encompass the necessary changes that are required for sustainable future. This may reinforce the 'business as usual' by covering the characteristics of a desirable future that is considered as sustainable (Milne et al., 2006).

As a result of the above-mentioned discussion, sometimes the journey metaphor has been categorized as weak sustainability (Milne et al., 2006). This issue mostly arises because the discourse in corporate reports use this metaphor to justify their actions, while they are not committed to fundamental principles of sustainability (Laine, 2010). Hence, the journey metaphor still can be used with a transformative approach (Milne et al., 2006). More research on the process of reporting, instead of language of reports, may bring about a better understanding of this paradox and explain why current business practices may not result in fundamental changes necessary for addressing sustainability issues (Mitchell et al., 2012).

Although destinations in sustainability journeys are not clear or predictable, they are likewise not completely unknown. There are possible solutions for such wicked problems at each system state that are appropriate, based on understandings of sustainability at that specific time. Yet, unexpected outcomes of actions that are taken towards those solutions initiate new issues that instigate further considerations. The complexity of these changes makes it necessary to be ready for realignments and alteration in direction. These dynamics are investigated from a variety of perspectives in Chapter Three.

As mentioned before, sustainability-driven entrepreneurs are among the actors who have better opportunities to employ radical innovation and initiate fundamental changes required for sustainability transformation at different stages of these long term journeys (Klewitz & Hansen, 2014; Schmidpeter & Weidinger, 2014). Considering the complexities around the concept of sustainability and its application in entrepreneurship research, identifying a sustainability-driven entrepreneur can become a challenging task and may stay at a theoretical and abstract level (Tilley & Young, 2009). Hence, a clear definition of sustainability-driven entrepreneurs is required to lead this research in next stages, and position this research among different streams. This is further explored in the following section.

2.1.2.5 Sustainability-Driven Entrepreneurship and Its Contextualization within This Research

Sustainability-driven entrepreneurship is a developing area of knowledge and as shown in Figure 2-4, compared to social and environmental entrepreneurship, is at a relatively early stage (Belz & Binder, 2017; Cohen & Winn, 2007; Klewitz & Hansen, 2014; Levinsohn, 2013; Parrish & Tilley, 2010; Parrish, 2008; Schaper, 2010). A variety of labels are given to these entrepreneurs, including sustainability entrepreneurs (Parrish, 2008), sustainability-driven entrepreneurs (Parrish, 2010), sustainopreneurs (Abrahamsson, 2007), and value-oriented entrepreneurs (Choi & Gray, 2008b). Examination of the literature demonstrates that two terms, sustainable entrepreneurs (Cohen & Winn, 2007; Dean & McMullen, 2007) and sustainability-driven entrepreneurs (Parrish, 2010; Schlange, 2006a), are the most common among scholars. The term 'sustainability-driven entrepreneurship' (as advocated by Parrish (2010)) best reflects the logics behind this concept, and consequently will be used in this research in place of other authors' varied terminology whenever their definitions correspond to the one explained further below.

Definitions and main areas of concern in sustainability-driven entrepreneurship are not yet clear and still evolving (Schick et al., 2002; Schmidpeter & Weidinger, 2014; Shepherd & Patzelt, 2011). As discussed in the previous sections, this lack of clarity is partially inherited from the literature of social and environmental entrepreneurship, while the contested nature of sustainability adds to these complexities. Hence further explanation is required to justify the definition in this research. Table 2-2 displays a few definitions of sustainability-driven entrepreneurship that reflect the diverse perspectives of this concept.

Table 2-2 Definitions of sustainability entrepreneurship / sustainability-driven entrepreneurship

Author	Definition
Shepherd and Patzelt (2011, p. 137)	"… the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society"
Tilley and Young (2009, p. 88)	"… holistically integrates the goals of economic, social and environmental entrepreneurship into an organisation that is sustainable in its goal and sustainable in its form of wealth generation"
Cohen and Winn (2007, p. 35)	"… how opportunities to bring into existence 'future' goods and services are discovered, created, and exploited, by whom, and with what economic, psychological, social, and *environmental* consequences" (italics in original)
Dean and McMullen (2007, p. 58)	"the process of discovering, evaluating, and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant"

These definitions vary from holistic approaches that consider financial and non-financial values, to triple bottom-line perspectives (integrating social, environmental, and economic goals), to profit-driven ventures that find financial gain from market failures. Many definitions of sustainability entrepreneurship and sustainability-driven entrepreneurship are influenced by the literature about environmental entrepreneurship, and on many occasions the terms 'sustainability entrepreneurship' and 'environmental entrepreneurship' are used interchangeably (Kuckertz & Wagner, 2010; Levinsohn, 2013; Parrish, 2007) which does not resonate the full depth of this concept. Yet, as discussed earlier in Sections 2.1.2.1 and 2.1.2.2, some of the literature in social and environmental

entrepreneurship is still relevant and can be used to inform the sustainability-driven entrepreneurship literature.

Nevertheless, influenced by the contested nature of sustainability, the definitions and practical implications of "sustainable enterprise" (and consequently sustainability-driven entrepreneurs) are not clear and are subject to interpretation; they are affected by the worldviews and theoretical lenses of researchers (Keijzers, 2002; Sharma, 2002; Stubbs & Cocklin, 2008; Tencati & Perrini, 2006). While previous research contributes to expanding the emerging concept of sustainability-driven entrepreneurship, almost none of the preceding reports present a comprehensive definition that can easily be explained in practical terms.

Adopting the transformative approach as the paradigm of change towards sustainability, this research builds on the more inclusive definitions of sustainability-driven entrepreneurship, such as that of Shepherd and Patzelt (2011) in Table 2-2. It considers all activities that promote preservation and/or advancement of the capacity of natural and social environments to support human life, with a focus on those activities that depart considerably from current routines (hence, are considered innovative) and entail both economic and non-economic gain for individuals and societies. These entrepreneurial activities take place through sustainability-oriented innovation in different dimensions of (1) processes, (2) organizations, and/or (3) products (Klewitz & Hansen, 2014).

Translating the above definition into more practical terms, in this research sustainability-driven entrepreneurs are defined as people who create ventures that preserve and/or advance the natural and/or social environment (by the definition of the time) at startup (thereby excluding intrapreneurs), along with the goal of being a financially viable business (thereby excluding non-profit organizations). Furthermore, their businesses should exhibit clear departure from current trends and practices in their sector (i.e., they are pioneers), introducing new products, processes, and services to address the transformative position of this research towards sustainability. Moreover, by current definitions and understandings, sustainability-driven entrepreneurs should not intend to cause either social or environmental degradation and should result in clear economic and non-economic gain for individuals, economy, and society. These criteria are summarized in Table 2-3 and will be used in Chapters Five and Six to justify the selection of the sustainability-driven entrepreneurs in this thesis.

Table 2-3 The definition of sustainability-driven entrepreneurship used in this research

<table>
<tr><td colspan="2" rowspan="2">Sustainability-driven entrepreneurship</td><td colspan="2">Promote preservation and/or advancement in any of</td></tr>
<tr><td>Nature</td><td>Community</td></tr>
<tr><td rowspan="3">By introducing new</td><td>Products</td><td colspan="2" rowspan="3">Resulting in economic and non-economic gain for
• Individuals
• Economy
• Society</td></tr>
<tr><td>Processes</td></tr>
<tr><td>Services</td></tr>
</table>

The reader should bear in mind that while the above-mentioned criteria are used to choose appropriate participants and the selected entrepreneurs are believed to have developed ventures that address significant social and environmental issues, by no means are they inclusive enough to consider all aspects of sustainability. Hence, the definition and selection of cases are constrained by complexities associated with the "sustainability" concept and restricted by definitions of time and place and they do not represent a 'sustainable venture'. The following sections explore different dimensions of sustainability-driven entrepreneurship in relevant literature.

2.2 Different Streams of Research in Sustainability-Driven Entrepreneurship

Similar to the literature on conventional entrepreneurship, some of the literature on sustainability-driven entrepreneurship discusses the motivations of sustainability-driven entrepreneurs (Choi & Gray, 2008b; Dixon & Clifford, 2007; Koe, Omar, & Majid, 2014; Krueger et al., 2011; Poldner, Shrivastava, & Branzei, 2015; Walker, 2006). Some researchers consider these entrepreneurs as people who are motivated by their non-financial values (Gibbs, 2006; Kirkwood & Walton, 2010; Parrish, 2008; Poldner et al., 2015; Tilley & Young, 2009), while others perceive sustainability-driven entrepreneurship as an economic action of profit-seeking individuals, who take social and environmental failures as opportunities for financial gain (Cohen & Winn, 2007; Dean & McMullen, 2007). Gibbs (2006) adds compliance-based entrepreneurs to the above-mentioned groups; who may get involved in sustainability practices because of a change in regulations and legislation.

Boundaries between the various groups are fuzzy (Gibbs, 2006; Kirkwood & Walton, 2010), and finding a typical profile for sustainability-driven entrepreneurs is difficult (Schaper, 2010). Entrepreneurs may respond to all of the aforementioned drivers simultaneously (Gibbs, 2006; Walley & Taylor, 2002), or they may move sequentially

through a range of dominant motivators at different stages of their venture development. While the motivations and characteristics of entrepreneurs are not the main focus in this research, they can influence the outcomes in entrepreneurial processes and scholars have discussed the close relationship between 'values' and 'causes' or 'motivations' and 'identities' of individual entrepreneurs in their organizations (Anderson, 1998; Choi & Gray, 2008b; Jolink & Niesten, 2015; Levinsohn, 2013; Schaltegger, 2002; Schaper, 2010; Walton & Kirkwood, 2013).

Commitments and emotional attachments of entrepreneurs to their environmental and social concerns, create an obligation to persist in their actions (Jolink & Niesten, 2015; Silajdžić, Kurtagić, & Vučijak, 2015) and encourage other people to employ the same pathways (Jolink & Niesten, 2015). Indeed, some scholars have argued that the main difference between sustainability-driven entrepreneurship and conventional entrepreneurship is entrepreneurs themselves (Schick et al., 2002), and the effort they exert to find institutional embeddedness (De Clercq & Voronov, 2011). For example, Kuckertz and Wagner (2010), in a quantitative research and large-scale survey, show that sustainability orientation (social and environmental concerns) motivate individuals to start their socially- or environmentally-friendly businesses, however this tendency declines with work experience of individuals. Similarly, Silajdžić et al. (2015) show that although the context of transition economies does not provide supportive environment for socially- and environmentally-friendly businesses, personal motivation of entrepreneurs inspires them to start their new practices.

Similarly, Schlange (2006b) highlights the influence of worldviews and philosophies of sustainable entrepreneurs on their actions, which is aligned with findings from O'Neill, Hershauer, and Golden (2006). They discussed individual entrepreneurs' values and their sense of belonging as an important mission, which encourage entrepreneurs to initiate their practices and persist on their actions. Some scholars have gone further and suggested that the key approach for studying sustainability-driven entrepreneurs is the 'psychological perspective' that describes the motivation, cognition, and passion of entrepreneurs (Shepherd & Patzelt, 2011). Nevertheless, ascertaining these motivations and characteristics before starting a study is practically impossible because in the majority of cases, there is no data about entrepreneurs' intention prior to the study. Their motivation only becomes clear after interviewing and having conversations with them.

Other research looks at opportunity recognition and exploitation, and processes of business development in sustainability-driven entrepreneurship (Belz & Binder, 2017; Cohen & Winn, 2007; Dean & McMullen, 2007; Larson, 2000; Patzelt & Shepherd, 2011; Schaltegger et al., 2015; Schick et al., 2002). While knowledge of market, technology, and management is important for conventional entrepreneurs to identify an entrepreneurial opportunity, awareness about social and environmental issues enhances the entrepreneurial abilities to recognize 'sustainable opportunities' (Patzelt & Shepherd, 2011; Yitshaki & Kropp, 2015), which are defined as "*opportunities that sustain the natural and/or communal environment as well as provide development gain for others"* (Patzelt & Shepherd, 2011, p. 632). This notion underscores the fact that knowledge and information about environmental and social problems may encourage entrepreneurial actions. Yet, Schick et al. (2002), in a qualitative research of sustainability-driven entrepreneurs, show that institutions that support start-ups do not provide sufficient information to such individuals in this regard.

Exploitation of these sustainable opportunities result in new organizations that follow different rationales compared to conventional businesses. (Belz & Binder, 2017; Schaltegger et al., 2015; Schick et al., 2002). These organizations may address concerns raised from conventional business practices (Jolink & Niesten, 2015; Schaltegger et al., 2015) and transform disvalues of unsustainable practices into values for conscious customers and other stakeholders (Jolink & Niesten, 2015). Schaltegger et al. (2015, p. 3) define a business model for sustainability as:

> *A business model for sustainability helps describing, analyzing, managing, and communicating (i) a company's sustainable value proposition to its customers, and all other stakeholders, (ii) how it creates and delivers this value, (iii) and how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organizational boundaries*

Organization design, in sustainability-driven entrepreneurship, is a continuous process of creation and re-creation, which does not have a fixed outcome (Parrish, 2010). The outcome is a business model that generates value for a diverse range of stakeholders beyond customers and shareholders (Jolink & Niesten, 2015; Schaltegger et al., 2015). Parrish (2010) investigates how such processes are different from those in conventional ventures. He uses qualitative data, collected from four case studies, to explain these variations. The organizing principles involved are different, as sustainability goals are not only means to create financial benefit, but are also goals in their own right. This

philosophy creates a different logic for organizing and using available resources to enhance and maintain their quality for the longest time possible. Aligned with this stream Choi and Gray (2008b), in a case study of 21 sustainability-driven entrepreneurs, found that entrepreneurs were likely to have limited experience and to obtain finance from unusual sources. They argue that sustainability-driven entrepreneurs employ unconventional human resource management practices to build a strong organizational culture. These people use their sustainable values and goals as their competitive advantage in their marketing strategies and utilize innovative methods to balance their financial goals with environmental and social aims.

The analysis of the literature shows that themes prevalent in sustainability-driven entrepreneurship literature have undergone a number of changes over time (Lichtenstein, 2011; Thompson et al., 2011). Earlier literature mainly emphasizes definitions and typologies of sustainability-driven entrepreneurs (Cohen et al., 2008; Cohen & Winn, 2007; Dean & McMullen, 2007), while more recent literature focuses on other aspects such as opportunity recognition (Patzelt & Shepherd, 2011; Shepherd & Patzelt, 2011) and outcomes of entrepreneurial actions (Gibbs & O'Neill, 2014; Hall et al., 2010; Jolink & Niesten, 2015; Klein Woolthuis, 2010; Klewitz & Hansen, 2014; Walton & Kirkwood, 2013). This more recent literature investigates how sustainability-driven entrepreneurs' actions could identify and solve wider societal problems (Dean & McMullen, 2007; Lichtenstein, 2011; Parrish, 2010; Patzelt & Shepherd, 2011; Schaper, 2010; Shepherd & Patzelt, 2011) where they are even named as 'panacea' for sustainability-related issues (Hall et al., 2010). However, this extreme position has been criticized in the literature (Klewitz & Hansen, 2014). This stream of research in sustainability literature is more associated with the research problem in this thesis and thus is further explored.

Considering sustainability-driven entrepreneurs as people who are capable and motivated to change societal systems, they play important roles in transitions towards sustainability (Anderson, 1998; Gibbs, 2006; Hockerts & Wüstenhagen, 2010; Klewitz & Hansen, 2014; Schaltegger & Wagner, 2011; York & Venkataraman, 2010). Their innovative approaches could initiate co-evolutionary processes, which are required to solve sustainability issues (Köhler, 2012; Markard et al., 2012; Schaper, 2010). These entrepreneurs can thereby contribute to non-financial aspects of individuals' lives (Shepherd & Patzelt, 2011), by creating new products, processes, and market structures that challenge conventional

models (Gibbs, 2006; Walton & Kirkwood, 2013). Building upon this stream of research, this thesis investigates the strategies and actions utilized by sustainability-driven entrepreneurs in their business environment to achieve their goals and bring about broader changes in their societal system.

2.3 Sustainability-Driven Entrepreneurs as Facilitators of Change

This section examines the stream of the literature on sustainability-driven entrepreneurship that focuses on change and identifies entrepreneurs as facilitators of change. Influenced by the literature on entrepreneurial motivation, this literature positions sustainability-driven entrepreneurs along the spectrum from passionate, value-driven people, who want to change the norms and institutions in their business environment, to market-driven individuals, who use opportunities from market failures to gain financial benefit and change the market to a new equilibrium state (Anderson, 1998; Klewitz & Hansen, 2014). Nevertheless, all these entrepreneurs play a role in transitions towards a sustainable future (Walley & Taylor, 2002) and sustainability-driven entrepreneurship is perceived as complex multi-discursive processes that rise in tensions between sustainability and business motives (Poldner et al., 2015). Hence, separating them into separate well-defined categories with clear boundaries is neither correct nor would be possible.

Associated with the value-driven group, sustainability-driven entrepreneurs may have broader drivers than merely financial gain (Keskin et al., 2013; Poldner et al., 2015; Schlange, 2006b). Poldner et al. (2015, p. 3) describe them as '*emotionally-charged and value-laden'*. These entrepreneurs who are motivated by social and environmental values, create different definitions of wealth that are not constrained by financial terms. They may question dominant philosophies in current socio-economic systems by creating new understandings of wealth and addressing sustainability issues (Parrish, 2010). Their motivations may include 'lifestyle' and 'contribution' among others (Tilley & Young, 2009), Parrish (2008, pp. 38-39) defines these value-driven entrepreneurs as:

> *..an existentialist who says 'no' to our dominant assumptions about the way to organise, and through saying 'no' is liberated to build a new form of organisation based on a new set of values, principles, and ideals that reflect the vision of sustainable development. Sustainability entrepreneurship, then, becomes less a technical exercise of reducing negative impacts, and more*

> *an expressive exercise of new possibilities for the ways humans can positively interact with each other and the natural environment that are supportive, restorative, and contributory.*

Alternative motives and drivers for sustainability-driven entrepreneurs may stimulate larger socio-economic influences (Parrish, 2010; Westley et al., 2011; Zhang & White, 2016), which are required for solving social and environmental problems. Sustainability-driven entrepreneurs can be associated with institutional entrepreneurs or system builders (Garud, Hardy, & Maguire, 2007; Klein Woolthuis, 2010; Kukk, Moors, & Hekkert, 2015; Pacheco, Dean, & Payne, 2010; Schaltegger & Wagner, 2011; Shepherd & Patzelt, 2011) who can, above the discovery of the opportunity, change the rules of the game in their business environment (Pacheco et al., 2010; Westley et al., 2011; Zhang & White, 2016). Institutional entrepreneurs are '*actors who have social skills, that is, the ability to motivate cooperation of other actors by providing them with common meanings and identities*' (Fligstein, 1997, p. 397).

Sometimes systems of incentives and institutional rules, such as '*industry norms, property rights, and government legislation*' (Pacheco et al., 2010, p. 466) are against sustainable actions (Pacheco et al., 2010; Westley et al., 2011). Institutional entrepreneurs leverage resources to challenge existing institutions, in order to substitute them with new ones or modify them into more appropriate ones (Stål, Bonnedahl, & Eriksson, 2014). Institutional entrepreneurship is complementary to institutional theory, which investigates how meanings may be stabilized and become 'taken-for-granted' in an organizational context (Fligstein, 1997; Scott, 2008; Tracey, Phillips, & Jarvis, 2011). The actions of institutional entrepreneurs may reduce the resilience of dominant institutional systems and create valid alternatives for them (Westley et al., 2011; Zhang & White, 2016).

Pacheco et al. (2010) use historical examples to demonstrate that sustainability-driven entrepreneurs may use strategies such as self-enforced regulations; property rights, and norms; voluntary third-party certification and labeling; and imposing formal regulations through collective actions to change the rules of the game in their industry or sector. While they consider entrepreneurial motivation as one of the drivers for these changes, they suggest that economic incentives are the main reason behind such activities because institutional change is usually costly. Aligned with this stream of research, Djupdal and Westhead (2015), in a qualitative study in Norwegian context, show how sustainability-driven entrepreneurs use third-party certification to address their liability of newness and

legitimize their actions. Moreover, Pinkse and Groot (2015), with an empirical example in the energy context, explain emphasize collective actions of sustainability-driven entrepreneurs for finding political influence.

Some scholars argue that sustainability-driven entrepreneurs could apply the basics of 'Corporate Social Responsibility' and 'Triple Bottom Line'[3] to their businesses (Dyllick & Hockerts, 2002; Santiago, 2013; Tilley & Young, 2009; Young & Tilley, 2006). Some attempts have been made to define sustainability-driven entrepreneurship by integrating environmental entrepreneurship, social entrepreneurship, and conventional entrepreneurship under the umbrella of Corporate Social Responsibility (Cohen et al., 2008; Young & Tilley, 2006). Using this perspective, sustainability becomes broader than solely considering social or environmental aspects separately (Dyllick & Hockerts, 2002; McDonough & Braungart, 2002). Associated with this stream, broader dependent variables are introduced for evaluation of ventures, which extend the entrepreneurial effects across the boundaries of economic development (Cohen et al., 2008). However, to the knowledge of the author, literature in this area is more at the conceptual level and further empirical investigation is required. Additionally, there is some debate about Corporate Social Responsibility, as typically implemented, as being nothing more than green washing or ethical-appearing behavior by organizations (Parguel, Benoît-Moreau, & Larceneux, 2011; Ramus & Montiel, 2005). This is further discussed in Section 2.1.2.4 where different approach towards sustainability are investigated.

Considering sustainability-driven entrepreneurs as financially-driven actors, other influences of sustainability-driven entrepreneurs are raised and include outcomes such as addressing market failures and commercializing innovations through 'creative destruction' (Schaltegger, 2002; Schaltegger & Wagner, 2011; Schumpeter, 1934). For example, Dean and McMullen (2007) and Cohen and Winn (2007) define sustainability-driven entrepreneurship in economic terms, while extending this economic perspective to other dimensions; considering sustainability-driven entrepreneurship as an action having psychological, social, and environmental consequences beside economic gain. This

[3] The 'Corporate Social Responsibility' and 'Triple Bottom Line' concepts are social constructs, without exact definitions. Their usage is typically localized and subjective, based on the needs and requirements of the stakeholders in a given situation (Carroll, 1999; Dahlsrud, 2008).

stream of literature is aligned with conventional lenses of entrepreneurship for opportunity exploitation (Levinsohn, 2013), where involvement in sustainability practices result in competitive advantage for associated ventures (Larson, 2000; Parrish, 2010).

Within this economic perspective, market failures inherent in economic systems are considered as opportunities for entrepreneurs to solve environmental degradations while gaining financial benefit (Cohen & Winn, 2007; Dean & McMullen, 2007; Potts, Foster, & Straton, 2010). Market failure is defined as '*the failure of a more or less idealized system of price-market institutions to sustain desirable activities or to stop undesirable activities*' (Bator, 1958, p. 351), which is based on neoclassical economic theory (Parrish & Tilley, 2010). Market failures can be categorized into five groups: (1) public goods – inefficient usage of public goods, such as international waters, which happens because of a lack in property rights; (2) externalities – inefficiencies in the exchange of productions or transformations; (3) monopoly power – profit maximization that occurs by overcharging because of a monopoly or excessive market power; (4) inappropriate government intervention – such as subsidies for extraction of natural resources; and (5) imperfect information – unequal access to information on the supplier or consumer side (Cohen & Winn, 2007; Dean & McMullen, 2007).

Literature on the latter stream, which investigate sustainability-driven entrepreneurs who are motivated by financial motivation, tends to emphasize technological innovation (Levinsohn, 2013; Schaltegger, 2002). This may stem from the belief that technological innovations can considerably shape market and society (Schaltegger, 2002; Schlange, 2006a) where their wider influences depend on the market-share (Schaltegger & Wagner, 2011). Researchers in this area have tended to be Dutch or German (Levinsohn, 2013), with a primary focus on eco-innovation, a topic of interest in more developed countries that are advanced in technological aspects. This focus on technological aspects has also resulted in a paucity of research about complementary social innovation, essential for Sustainability Transitions, even within the market-oriented perspective. Since changes in technology are accompanied with changes in social, cultural, and political dimensions to be considered legitimate by associated stakeholders. This notion is also discussed in the literature on Sustainability Transition, presented in Chapter Three. Thus, more research considering social aspects of transitions is necessary to bring about a better understanding of such multi-faceted changes. This research addresses this gap by choosing case studies

that have priorities for socially-oriented innovation[4], and considering the social aspects of transitions in the analysis of the findings.

This review of literature shows that those sustainability-driven entrepreneurs who are mainly motivated by their values are more interested in changing the norms and rules in their business environment, and so tend to create new ones (O'Neill et al., 2006; Pacheco et al., 2010) that incorporate social and environmental principles at their core (Dean & McMullen, 2007; Young & Tilley, 2006). These people have different definitions of wealth that are not based on solely economic criteria (Tilley & Young, 2009). On the other hand, sustainability-driven entrepreneurs who are mainly driven by economic gain attempt to change the business environment towards sustainability through addressing market failure and technological innovation (Carayannis & Papadopoulos, 2011; Schaltegger & Wagner, 2011). Such innovations could move the business environment to a more sustainable state as well as lead to economic gain. A comprehensive understanding of sustainability-driven entrepreneurship would become possible only if both perspectives are considered and included in the analysis (Pacheco et al., 2010).

Applications of theories such as Institutional Entrepreneurship (Schaltegger & Wagner, 2011; Shepherd & Patzelt, 2011), Transition Science (Gibbs, 2006; Parrish & Foxon, 2006), and Ecological Modernization (Gibbs, 2006) in sustainability-driven entrepreneurship literature, emphasize the concept of change and bring about appropriate frameworks for investigation of such changes. On the other hand, literature from other theories addressing change, such as Evolutionary Economics (Köhler, 2012), Transition Science (Geels & Schot, 2007; Kemp et al., 2007; Markard et al., 2012), and Ecological Economics (Potts et al., 2010) underscore sustainability-driven entrepreneurs as crucial actors in essential changes towards sustainability. However, research has overlooked the dynamics of change and how sustainability-driven entrepreneurs are effective during these changes (Beveridge & Guy, 2005; Cohen et al., 2008; Gibbs & O'Neill, 2014; Janssen & Moors, 2013; Kukk et al., 2015; Schaltegger et al., 2015; Schaper, 2010; Tracey et al., 2011; Walton & Kirkwood, 2013). More contextual research with sociological approach, considering entrepreneurs in their context, is necessary to find a better awareness about

[4] '*that is, the integration of ecological and social aspects into products, processes, and organizational structures*' (Klewitz & Hansen, 2014, p. 57).

entrepreneurial roles and constraining factors imposed from their business environment (Kirkwood & Walton, 2010; Schaltegger et al., 2015; Taylor & Walley, 2004; Trivedi & Misra, 2015; Vogel & Fischler-Strasak, 2014). This notion is the focus of research in this thesis. Thus far, some research has employed similar approaches to investigate sustainability-driven entrepreneurs as change-makers. These studies are discussed here in a chronological order.

In one of the early studies, Parrish and Foxon (2006) proposed a co-evolutionary framework to investigate how sustainability-driven entrepreneurs challenge the lock-ins of existing technologies. They showed that their case study company developed an innovative business model to challenge several aspects of the system, including technologies and institutional structures. However, they argued that:

> *The actual mechanism linking micro-scale sustainability entrepreneurship and macro-scale socio-economic transformations toward sustainability have not been explicitly identified and discussed in either theoretical or empirical studies (Parrish & Foxon, 2006, p. 49).*

Further research is required to understand how actions of sustainability-driven entrepreneurs at micro level may change the characteristics at system level. In another exploratory research Choi and Gray (2008a) investigated 30 entrepreneurs to find out how new business models of sustainability-driven entrepreneurs influence the wider context embedding those businesses. They showed that sustainability-driven entrepreneurs may work with lower financial performance to pursue their social and environmental goals, while they volunteered themselves as role models for other entrepreneurs and business owners. Sustainability-driven entrepreneurs are motivated to change their business environment towards a more socially- and/or environmentally-friendly state and they consider their businesses as a means to achieve such changes. Their strong commitments help them create solid organizational culture, and employ socially- and environmentally-responsible practices in their businesses. While Choi and Gray (2008a) research, as one of the early empirical work in this field, clarifies some aspects of entrepreneurial actions, they do not offer enough explanation about how sustainability-driven entrepreneurs may find wider effects in their sector. Particularly, they do not describe how interactions among sustainability-driven entrepreneurs and other actors are important in this regard.

Addressing some of the above-mentioned concerns, Klein Woolthuis (2010) investigated how sustainability-driven entrepreneurs interact with their environment to find out about

strategies they use to bend conditions in their favor. He examined the construction industry of the Netherlands with qualitative data and 16 interviews as the main method for data collection. The research identified two groups of entrepreneurs: (a) system builders; and (b) followers. While the former engage in building new systems to challenge the current dominant trends, the latter follow institutionalized norms and use end-of-pipe measures for incremental improvements. System builders are involved in constant improvement of their businesses by creating and recreating value in their ventures and across other organizations. System building is more likely to occur in an institutional environment where voluntary actions are encouraged, but it is less attainable where the business environment is complex and uncertain. System builder entrepreneurs put in effort to develop their new networks, while followers stick to current networks to diffuse their innovations. The author suggests that further research considering multi-dimensionalities of entrepreneurial practices is required to create a better understanding about the process of change. Moreover, their research only reflects entrepreneurs' opinions, and further research considering multiple perspectives of actors involved in those situations may result in more comprehensive outcomes.

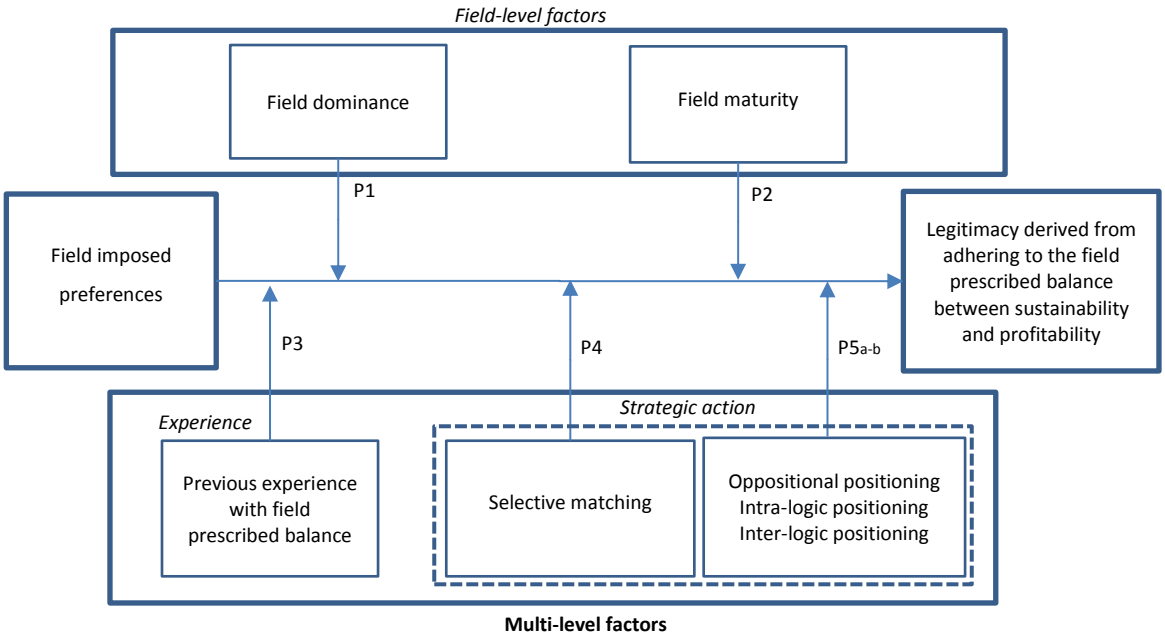
In another research with a more robust theoretical foundation, De Clercq and Voronov (2011) conceptualize how sustainability-driven entrepreneurs, as newcomers to a field, may find problems with regards to legitimacy of their new socially- or environmentally-friendly practices. They argue that further attention is required to understand how sustainability-driven entrepreneurs balance their financial and non-financial objectives and find legitimacy by confronting and/or fitting to expectations and what is 'taken-for-granted' in their field. Sustainability-driven entrepreneurs are bounded by their external environment and compliance emerges as an outcome of interactions between individual actions and institutional constraints. They argue:

> *the legitimacy that entrepreneurs derive from adhering to the field-prescribed balance of sustainability and profitability logics results from the interplay between field-level expectations regarding the relative importance of profitability, versus sustainability logics and individual agency through which entrepreneurs impose their own interests on the focal field and incumbents (326 – 327).*

The authors propose a conceptual model (Figure 2-5) to show the interplay between domain institutional constraints, which are dependent on field dominance and maturity, and micro-level factors, which are dependent on experience and strategic actions of

entrepreneurs. Dominance of the focal field means ability of the field to defend itself against alterations, and field maturity indicates the degree of dependency among professions to dominant members. They propose that strategic actions of sustainability-driven entrepreneurs may diminish the constraining level of institutional structure imposed by field expectations. This research suggests a strong theoretical foundation for further exploration of this concept in an empirical study.

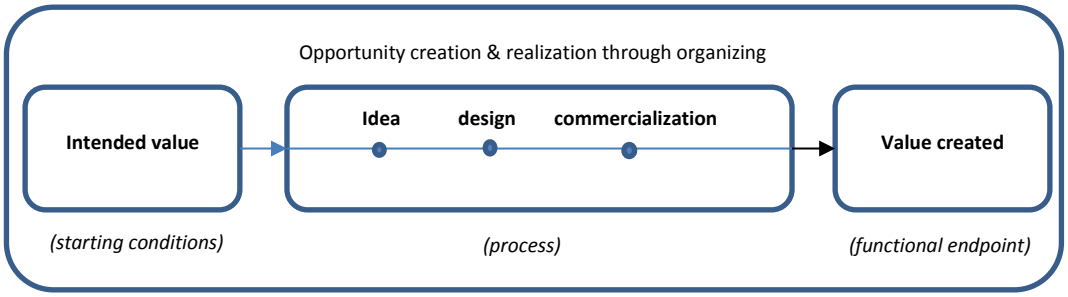
Figure 2-5 Conceptual model for interactions between field-level and micro-level factors



Source: (De Clercq & Voronov, 2011, p. 6)

In a similar study to Choi and Gray (2008b) and Klein Woolthuis (2010), Keskin et al. (2013) investigated the process of sustainability innovation in eight Dutch sustainability companies. They proposed a five-stage model (Figure 2-6) illustrating the course of value creation through entrepreneurial actions, starting with the intentions of the entrepreneurs, moving to opportunity creation and organization, and ending with created value. Similar to De Clercq and Voronov (2011) they argue that finding external legitimacy is an important aspect of the 'idea' phase. It facilitates establishing new networks and attracting other people (such as investors and sponsors), however they do not explain how this legitimization takes place. They argue that developing necessary human resource and internal knowledge is an important part of the design phase. While they have collected information from multiple perspectives, they do not pay enough attention to external interactions of these businesses, which may play a significant role in the process of legitimization and require further investigation.

Figure 2-6 A process model of entrepreneurial value creation



Source: (Keskin et al., 2013, p. 52)

With a similar focus on internal aspects of a sustainable enterprise, Walton and Kirkwood (2013) show that sustainability-driven entrepreneurs actively address their concerns with their services and products. They challenge dominant patterns and institutions in the business environment through their different business models and strong commitment to their environmental value. Their findings are aligned with the arguments from Keskin et al. (2013) and Choi and Gray (2008b). However, researchers such as Jolink and Niesten (2015), further discussed in the following paragraphs, propose a different opinion and argue that sustainable entrepreneurs are constantly balancing their financial and non-financial goals and may play different roles based on their strong value propositions or big market shares. Their research reflects only the entrepreneurial perspective and Walton and Kirkwood (2013) call for further research to bring about a better understanding about entrepreneurial roles in the process of change.

Concerning the interactions of sustainability-driven entrepreneurs, Janssen and Moors (2013) investigated how some examples of these people, in the health sector of the Netherlands, network with their business environment in order to contribute to the process of transition towards a more sustainable healthcare system. Similar to the conceptual model of De Clercq and Voronov (2011), their research confirms that while successful entrepreneurs' strategies may change the system context, that context imposes opportunities and constraints on the action of the entrepreneurs. This duality of structure is created and modified through the interactions of entrepreneurs along with other actors. Janssen and Moors (2013), divide entrepreneurs into four types: isolated, innovative, evolutionary, and revolutionary. Their exploratory research provides valuable insight (Table 2-4) about the entrepreneurial process while considering the societal context; however, further research with a more robust theoretical base is essential to propose better theoretical propositions.

Addressing this gap, in another piece of empirical research with a more robust theoretical framework, Gibbs and O'Neill (2014) investigated how green entrepreneurs in the building sector of Wales and England are influential in changing their business environment. Adopting a qualitative approach, they interviewed 55 actors occupying various roles in the green construction industry, which enabled them to consider diverse perspectives. Their research shows that the concept of green entrepreneurship is fluid and dynamic, and associated businesses move along the spectrum between the so called 'green' and 'conventional' models. The authors argue that literature on related topics such as Socio-technical Transition and especially the Multi-Level Perspective (MLP) has to consider this complexity and diversification in order to contextualize entrepreneurial actions and present a better understanding of emerging changes.

In another research, focusing on sustainability-driven entrepreneurship business models, Jolink and Niesten (2015) show how sustainability-driven entrepreneurs create value for environmentally concerned consumers through their innovative business models, while at the same time they replace the disvalue of conventional products by eliminating the harmful effects of their production cycles. They investigate the organic food and beverage industry in the Netherland context with a qualitative approach and considering different sources of information such as reports, websites, and semi-structured interviews. They introduce continuous personal commitments of sustainability-driven entrepreneurs as their internal source of advantage in their business model. Moreover, they argue that these entrepreneurs position their offerings by either cost-based focus or differentiation strategies and conclude that exclusive propriety to sustainable objectives with a small market influence may be as effective as a low priority sustainable goals and a larger market impact.

Confirming the findings from Gibbs and O'Neill (2014) about the hybrid character of sustainability business models, Poldner et al. (2015) showed that sustainability-driven entrepreneurship is a multi-discursive concept. They employed a qualitative research strategy and ethnographic approach using different sources of data such as interviews, pictures, and videos in ethical fashion industry for their investigation. They described sustainability-driven entrepreneurs as value-driven individuals fueled by emotion who may move across different dimensions of a sustainable business in the process of business development. Sustainable entrepreneurs may focus on one dimension of their venture

ignoring the feedback from the environment, which may initiate from their strong emotional involvement. The authors concluded that sustainability-driven entrepreneurship is a complex process that moves across different dimensions of sustainability, where finding a balance among these dimensions is essential in order to create a better outcome.

With a different focus, Pinkse and Groot (2015) investigate how sustainability-driven entrepreneurs become politically active and change the rules, regulations, and industry norms to overcome market barriers in the Netherlands' energy sector. The authors employed a qualitative approach to show how these entrepreneurs navigated between their individual and collective interest to change the power imbalance between themselves and incumbents. As entrepreneurial resources are limited, they employ more efficient cost-effective approaches to influence policy makers such as (information-based activities, expert-opinion-changing activities, self-regulation activities) research reports, social media, changing expert opinion leaders, and self-regulative restrictions. Moreover, they cooperate to form collective actions and enhance their legitimacy in the political arena by using political intermediaries such as industry associations which enable them to organize larger networks and bring about more resources. Information-based activities were used to overcome the ambiguity in the policy arena. They argue that entrepreneurs who are capable of leveraging collective actions and the ones who are able to develop legitimate new models and expertise, are more likely to find political influence; creating mutual dependency with incumbent players may also result in higher political influence.

Finally, In another research about the sustainability-driven entrepreneurship process and by extending the findings from Keskin et al. (2013), Belz and Binder (2017) introduce a six-steps procedure for sustainability-driven entrepreneurship as (1) recognizing social or ecological problems; (2) recognizing social and ecological opportunity; (3) developing a double-line solution; (4) developing a triple-bottom-line solution; (5) funding and forming a sustainable enterprise; and (6) entering a sustainable market. They share the same opinion with the previous writers about the hybrid character of a sustainable enterprise and clarify that sustainable businesses start with double-bottom-line and integrate other aspects of sustainability during the course of development. The research is based on qualitative data with interviews as the main method for data collection. Their findings show that sustainability-driven entrepreneurs come across their ideas by having personal

or professional experience in related fields. Table 2-4 summarizes the above-mentioned discussion. As can be concluded there are few studies investigating sustainability-driven entrepreneurs as change-makers. All the papers have a qualitative approach, except one that offers a robust conceptual framework for further empirical investigations. Thus, more explorative research is required to develop the foundations of this area of research that enables future researchers to conduct more quantitative and generalizable research. Moreover, analysis of the studies shows that most of the research is focused on the UK and Dutch contexts and there is a need for further research in other sociopolitical and geographical settings such as New Zealand.

This research addresses some of the shortcomings in this field. It employs a sociological approach investigating sustainability-driven entrepreneurs in their context. Based on the suggestion from Gibbs and O'Neill (2014), Sustainability Transition offers a fertile ground for such contextualization. As such, this thesis uses socio-technical transition as the overarching framework for investigation. This notion is further discussed in Chapter Three of the thesis. Moreover, as discussed earlier, De Clercq and Voronov (2011) in their conceptual paper, describe the process of change as an interplay between field-level factors and micro-level characteristics. Following this explanation, this research employs a more systematic approach to collecting information from multiple sources of data, capturing the characteristics of the contexts and diverse perspectives, while showing the comprehensive picture of entrepreneurial actions. To achieve these goals, three research questions are defined as discussed in the following section.

Table 2-4 Summary of the literature investigating sustainability-driven entrepreneurs as change makers

Paper	Context	Research Method	Findings	Critical Suggestions
(Parrish & Foxon, 2006)	Energy sector	One qualitative case study	• Introduces a co-evolutionary framework to show how interactive dynamics among technologies, institutions, and business strategies work • Use the framework to show how NativeEnergy company employs an innovative business model to address the lock-ins and bring about institutional change	• Based on one case study
(Choi & Gray, 2008a)	Different contexts	Qualitative case study examining 30 entrepreneurs	Find differences between conventional entrepreneurs and sustainability-driven entrepreneurs such as: • Commitments to a meaningful purpose for making a social or environmental difference • Being selective about choosing their financial resources • Hiring people with the same values • Emphasizing identities and promoting companies values • Building strong organizational culture based on their values • Making conscious decisions to pursue social and environmental goals with lower financial performance by sustainability-driven entrepreneurs • Employing environmentally- and socially-friendly practices in their businesses • Not willing to exit their businesses merely for financial profit • Involvement in donations and giving back to their communities • Role modelling for other businesses	• Lack of robust theoretical framework • Only based on entrepreneurs' perspective

Paper	Context	Research Method	Findings	Critical Suggestions
(Klein Woolthuis, 2010)	Construction industry	Qualitative, based on 16 interviews	Categorizing sustainability-driven entrepreneurs into two groups: • System builders: where entrepreneurs build new systems and challenge the current one • System followers: where entrepreneurs use the current structure and systems to pursue their goals. System building strategies is more probable to occur in contexts that voluntary attention to sustainability is encouraged and less probable in when context is complex and uncertain	• Only based on entrepreneurial perspective
(De Clercq & Voronov, 2011)	Conceptual	Conceptual	• Propose a conceptual model to show interactions between filed-level characteristics and micro-level factors and their influence on legitimacy of entrepreneurial actions. • Strategic actions of entrepreneurs may change the institutional constraints imposed by field level expectations.	• Requires empirical investigations
(Keskin et al., 2013)	Different industries and sectors in Dutch context	Qualitative	• Using multiple perspectives to explain the innovation process in ventures driven by sustainability • Proposing a five-steps model for sustainability-driven entrepreneurship as: (1) intended value, (2) idea, (3) design, (4) commercialization, and (5) value creation • Explaining external factors influential in the process of innovation as validation, network, and market orientation and describing internal factors for success as human resource, and managing innovation	• Further research about external interactions and strategies are essential • Based on limited sample of eight entrepreneurial companies

Paper	Context	Research Method	Findings	Critical Suggestions
(Janssen & Moors, 2013)	Dutch health care system	Qualitative with semi structures interviews	• Describing change as an interplay between the system context, creating opportunities and threats, and entrepreneurial strategies such as networking, cooperation, and standardization among others • Introducing four types of entrepreneurs as (1) isolated: entrepreneurs who consider system context completely irrelevant, (2) innovative: entrepreneurs who think they can only contribute by their successful innovative models, (3) evolutionary: entrepreneurs who think they can partly be effective in changing the health care system context, and (4) revolutionary: entrepreneurs who think they can successfully change system context, while developing their innovative models	• Further research in this area is required for a more comprehensive picture
(Walton & Kirkwood, 2013)	Different industries in New Zealand context	Qualitative	• Sustainability-driven entrepreneurs create alternative business models for current business practices • Their strong commitments to their social and environmental goals and viable business models challenge the dominant trends in their sector	• Based only on entrepreneurial perspective • Further research about process of change is required

Paper	Context	Research Method	Findings	Critical Suggestions
(Gibbs & O'Neill, 2014)	Green building sector of England and Wales	Qualitative employing multiple perspectives	• Sustainability-driven entrepreneurship is a dynamic concept and associated businesses move across the spectrum from 'green' to 'conventional'	• Further research using socio-technical transition framework may bring about better understanding
(Poldner et al., 2015)	Ethical fashion industry	Qualitative case study and ethnography using longitudinal data and employing discourse analytical perspective	• Propose a multi-discursivity approach to investigate sustainability-driven entrepreneurs and move beyond the binary logic of business versus sustainability • The empirical examination of the ethical fashion industry shows that developing this connection is a very complex process and it is economically, culturally, socially, ecologically, and aesthetically rich	• Further research with this approach is required

Paper	Context	Research Method	Findings	Critical Suggestions
(Belz & Binder, 2017)	Food and beverage Energy Retail Clothing	Multiple case study design with qualitative data	Introduce a six step process for sustainability-driven entrepreneurship • Recognizing a social or ecological problem • Recognizing a social or ecological opportunity • Developing a double bottom line solution • Developing a triple bottom line solution • Funding and forming a sustainable enterprise • Creating or entering a sustainable market There is no specific pathway towards triple bottom line solutions and economic, ecological, and social goals are integrated sequentially.	• Based on four entrepreneurs in various contexts, which make the comparison and considering the contextual factors difficult
(Pinkse & Groot, 2015)	Dutch clean energy sector	Multiple case studies with qualitative data	• Sustainability-driven entrepreneurs are politically active and employ collective actions to change regulations and institutions in their industry • They face competition from incumbent players in their sector who has nested interest in current rules and regulations	• Focusing on one aspect of collective actions

2.4 DEVELOPING THE RESEARCH QUESTIONS

Following the above-mentioned trends, this study incorporates a more systemic approach to investigate entrepreneurs in their socio-technical context. It considers different worldviews, and utilizes socio-technical transition literature as an appropriate theoretical lens for contextualization. This theory is discussed in detail in Chapter Three of this thesis. To investigate this research-gap the following overarching question is posed:

> Question 1: What are the roles and strategies sustainability-driven entrepreneurs use to facilitate wider systemic changes?

To address this research question, two sub questions arise. Sustainability ventures occur within a larger societal context (Klein Woolthuis, 2010; Schlange, 2006a). Their success or failure depends on their interactions with other actors and stakeholders in their business environment (Schlange, 2006a; Walley & Taylor, 2002). One of the main roles of entrepreneurs is to intentionally create networks of actors in order to gain resources and exploit opportunities to create value (Beveridge & Guy, 2005; Schlange, 2006a; Spence et al., 2011). Research shows that sectoral or socio-technical change is the result of messy interactions between different actors and environmental criteria (Beveridge & Guy, 2005). Sustainability-driven entrepreneurs, compared to conventional entrepreneurs, deal with a wider range of stakeholders, and consequently the stakeholder environment shows higher levels of complexity, which requires further investigation (Schlange, 2006a).

It is important to understand how different stakeholders are identified, how they work with each other (Larson, 2000; Schlange, 2006a), and how they are salient to decision-makers and managers (Freeman, 1994). The identification of stakeholders can be very subjective and may be based on perceptions of relative importance. In conventional ventures, they can be categorized based on three attributes (power, legitimacy, and urgency), and into different classes (such as dormant, discretionary, demanding, dominant, dangerous, dependent, and definitive) of stakeholders (Mitchell, Agle, & Wood, 1997). However, Schlange (2006a) argues that stakeholder identifications for sustainability-driven entrepreneurs are based on different attributes. He proposes:

> *Sustainability-driven entrepreneurs build their relationships with stakeholders who comply with the established societal rules (legitimacy*), share the entrepreneurs' system of basic values*

> *(philosophy*), and promise high potential to induce future change within the economic, social and ecological layers of society (impact*) [Note: * = italics in original] (p. 26).*

This categorization emphasizes sustainability-driven entrepreneurs as change-makers, which is aligned with the topic of research in this thesis. It stresses criteria such as legitimacy and impact to explain how these actors interact with other stakeholders to gain resources and find influence across organizations. Summarizing the above discussion, in order to understand how sustainability-driven entrepreneurs gain resources and influence other organizations, it is essential to identify the main contacts and stakeholders in their business environment. To address this research-gap the following research question is proposed:

> Question 2: What are the main interactions between sustainability-driven entrepreneurs and other actors?

While identifying actors in their business environment helps in understanding interactions among salient stakeholders, it is important to examine how contextual factors influence their role, which results in the third (and final) major question in this research:

> Question 3: What are the key factors that influence sustainability-driven entrepreneurs' actions for systemic changes?

There is limited literature that discusses how interactions of internal and external forces for entrepreneurs may facilitate change in different sectors (Beveridge & Guy, 2005; Janssen & Moors, 2013; Walley & Taylor, 2002). Socio-cultural factors embedded in different societies and supporting policies are influential in the willingness of ventures to get involved in sustainability practices (Klein Woolthuis, 2010; Spence et al., 2011) and the wider influence of their actions (Klein Woolthuis, 2010). Beveridge and Guy (2005, p. 673) argue that:

> *To understand the significance of entrepreneurs… we perhaps need to look beyond single actors or general large-scale forces as the sources of explanation, though they may indeed be part of the story.*

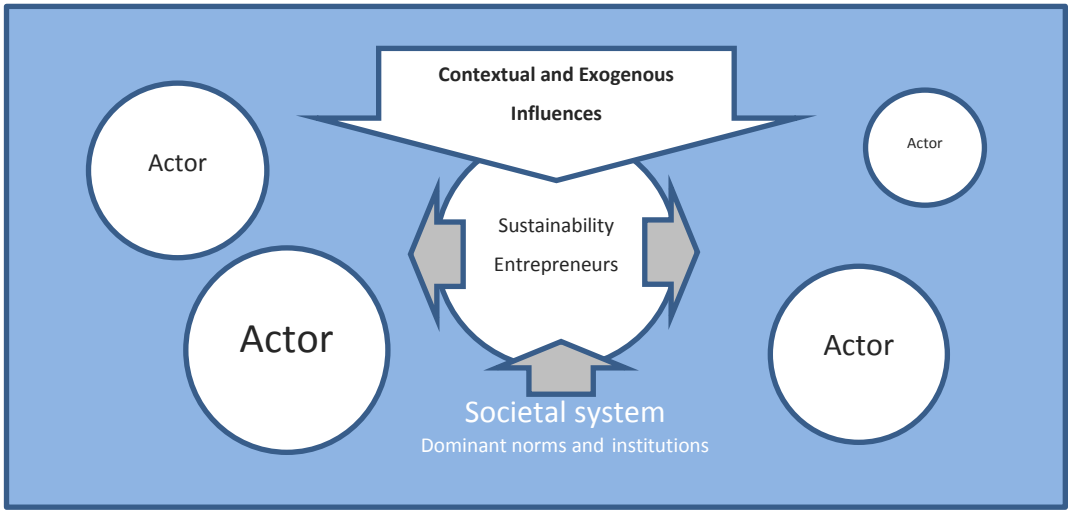
Without a supportive environment, the innovative activities of entrepreneurs may be hampered (Gibbs, 2006). More embedded research considering entrepreneurs in their local setting, with priority given to their native sustainability issues, would bring better

results (Beveridge & Guy, 2005; Gibbs, 2006; Janssen & Moors, 2013; Levinsohn, 2013). The third research question in this thesis investigates this notion.

2.5 Conclusion

In summary, the literature shows that there has been a call for an investigation into the process of change within sustainability-driven entrepreneurship. Although a few studies are available about this topic, further research with a more robust theoretical grounding should bring about a better understanding of the roles and strategies adopted by sustainability-driven entrepreneurs regarding the fundamental changes necessary to address sustainability issues. As can be concluded from the earlier discussions in this chapter, so far there is not enough research on this topic to conduct a quantitative analysis for generalization and hypothesis checking. Thus, this research employs an explorative strategy to add to the current research in this field and bring about a better understanding about the dynamics of change in transitions. This research addresses this gap investigating how sustainability-driven entrepreneurs and their societal context interact to create and modify new situations in a co-evolving manner. These interactions occur through the involvement of different stakeholders, as abstracted in Figure 2-7.

Figure 2-7 Investigating change processes involving sustainability-driven entrepreneurs by considering other actors and societal context



Source: Author's own

Exploring this process requires an appropriate framework that can address the complexity of the process. Socio-technical transition and co-evolutionary literature are fruitful and

promising areas of knowledge, which could offer an appropriate theoretical lens in this research to contextualize processes of change, focusing on sustainability-driven entrepreneurs' roles and strategies. The next chapter investigates related literature and justifies the theoretical lens used to explain the findings in this research.

Chapter 3 ***THEORETICAL FRAMEWORK***

Current innovation literature offers insufficient insights into how innovating entrepreneurs interact with the system context for their innovation. This gap in innovation literature is caused by insufficient knowledge on the characteristics, success and time-related dynamics of entrepreneurial strategies to interact with the wide variety of elements within the system context. An improved understanding of this interaction, especially for those entrepreneurs that contribute to the transition, could improve the understanding of innovation processes on a micro level and could be used to improve innovation policy (Janssen & Moors, 2013, p. 1361).

This chapter examines models from the field of transition theory in order to validate their adoption as the theoretical lens employed in this thesis. As discussed in Chapter Two, sustainability issues are conceptualized as 'wicked' problems (Holtz et al., 2015) and are often depicted with a 'journey' metaphor (Milne et al., 2006), as a process of transition from one system state to another. This chapter explains how understanding transitions is useful in explaining such changes towards a more sustainable future (Geels, Elzen, & Green, 2004). The chapter is organized into two main sections. In the following section, different theories for conceptualizing change are introduced, then different themes from the transition literature pertaining to sustainability are investigated, and entrepreneurs are highlighted as one category of influential actors. Finally, the chapter develops a novel combination of theories in Transition Science and Evolutionary Theories of Organizational Changes as theoretical framing to understand interactions among actors at the micro level and connect them to emerging characteristics at the system level.

3.1 Frameworks for Transition

As discussed in the previous chapter, sustainability problems are highly intertwined among diverse dimensions of societal systems, such as user practices, technologies, business models, and institutional and/or political structures (Farla, Markard, Raven, & Coenen, 2012; Markard et al., 2012). These difficulties are highly path-dependent (Åhman & Nilsson, 2008; Berkhout, Smith, & Stirling, 2004; Geels et al., 2004; Westley et al., 2011), and may generate socio-technical inertia due to institutional and processual interdependency (i.e. 'lock-ins') in existing sectors (Berkhout et al., 2004; Lachman, 2013; Safarzyńska & van den Bergh, 2010).

Some solutions produce incremental improvements rather than the radical changes that are necessary in the case of sustainability issues (Geels, Hekkert, & Jacobsson, 2008; Hegger, Van Vliet, & Van Vliet, 2007; Markard et al., 2012; Westley et al., 2011), and form positive loops that reinforce lock-ins (Farla et al., 2012). These incremental solutions may leave systems with persistent problems (Hegger et al., 2007), which are defined as "*problems inherent in system structures and thus cannot be solved with end-of-pipe solutions (thus without fundamentally changing the structure)"* (Lachman, 2013, p. 270). Hence, addressing those problems requires systemic changes that take place through

'sustainability innovation' where different dimensions of societal systems co-evolve towards a more sustainable state of production and consumptions (Elzen & Wieczorek, 2005; Gaziulusoy, Boyle, & McDowall, 2013; Westley et al., 2011). Such fundamental changes are also called 'system innovation' (Geels, 2004b; Kivisaari, Saari, Lehto, Kokkinen, & Saranummi, 2013; Pel, 2014).

While there is available knowledge about sustainable innovation, uncertainty about the consequences of implementation could be a major obstacle (Kemp, Schot, & Hoogma, 1998; Westley et al., 2011). Outcomes of these implementations are usually too complex to be controlled or managed (Köhler, 2012; Turnheim et al., 2015) and innovation can act as a double-edged sword where unexpected outcomes may cause new problems (Westley et al., 2011). This notion was also discussed in the previous chapter when sustainability issues were framed as wicked problems.

One way to address such complexities, which is also aligned with the journey metaphor of sustainability, is to set flexible goals towards a vision that is believed to be more sustainable (Berkhout et al., 2004; Fischler, 2014; Köhler, 2012), and change direction whenever there is a need for modification (Kemp et al., 2007; Turnheim et al., 2015). Better understanding of such changes is necessary to set suitable goals that cover the requirements for sustainability at each specific step (Fischler, 2014; Kemp et al., 2007), and avoid lock-in in the status-quo, to achieve more desirable outcomes from strategic choices (Frantzeskaki & de Haan, 2009; Frantzeskaki & Loorbach, 2010; Grin, Rotmans, & Schot, 2010).

Researchers examine the above-mentioned complexities from diverse perspectives, ranging from general theories such as evolutionary economics (Nelson & Winter, 1982a; van den Bergh & Gowdy, 2000), long waves or neo-Schumpeterian economics (Freeman & Louçã, 2001; Köhler, 2012), and actor network theory (Callon, 1986; Lee, Harindranath, Oh, & Kim, 2014) to those focused on technological aspects such as large technical systems (Bergek, Jacobsson, & Sandén, 2008; Hughes, 1987; Krishans, Mutule, Merkuryev, & Oleinikova, 2011), sectoral systems of innovation (Malerba, 2002), social construction of technology (Bijker, Hughes, Pinch, & Douglas, 2012), and constructive technology assessment (Schot & Rip, 1997). While the resulting reports from the above-mentioned theories offer useful insights into understanding the processes of change, they do not

employ holistic views considering different aspects of such changes (Bergek et al., 2008; Geels, 2004b; Hegger et al., 2007; McKelvey & Holmén, 2006; Shove, 2004).

These theories are either focused at the system level or on individual elements, and consequently do not present a rich image of interactions and emergent properties (Geels, 2004b; Lachman, 2013; Shove, 2004). For example, the literature on the technological systems approach has been criticized for focusing on the functions of current large technical systems while not examining the emergence of new systems (Geels et al., 2004; Geels & Kemp, 2006) or the literature on social construction of technology, large technical systems, and actor network theory does not explain substitution of technologies (Bergek et al., 2008; Geels, 2004b).

On the other hand, part of this literature (such as neo-Darwinism, Austrian economics, economic transformation, and the Schumpeterian perspective) focuses on the production side rather than considering the dynamic interaction of production and consumption (Foster & Potts, 2006; Geels et al., 2004; Lachman, 2013), while other literature (for example, long waves and evolutionary economics) focuses merely on economic aspects, concentrating on criteria such as GDP and growth, and consequently fail to sufficiently explain the co-evolution of subsystems, especially on the social side (Geels, 2004b; Geels et al., 2008; Köhler, 2012). By adopting a more systemic approach, this research integrates the focal aspects of all of the above perspectives and thereby overcomes their respective limitations.

Systematic investigation of these changes resulted in the emergence of the new field of 'Sustainability Transition' in the 1990s (Fuenfschilling & Truffer, 2014; Geels, 2004a; Geels et al., 2004; Lachman, 2013; Markard et al., 2012; Rip & Kemp, 1998); general theories and methodologies in this area have been framed based on system perspectives (Farla et al., 2012). This area of research was developed to analyze and foster radical change towards a sustainable future, featuring an interdisciplinary approach, and considering all dimensions (Hegger et al., 2007; Köhler, 2012; Seyfang & Longhurst, 2016). The idea of co-evolution is central to Sustainability Transition (Köhler, 2012; Seyfang & Longhurst, 2016), and meets the requirement of explaining the dynamics of change at different dimensions, levels, and timeframes (Parrish & Foxon, 2006), which is further explored in the following section.

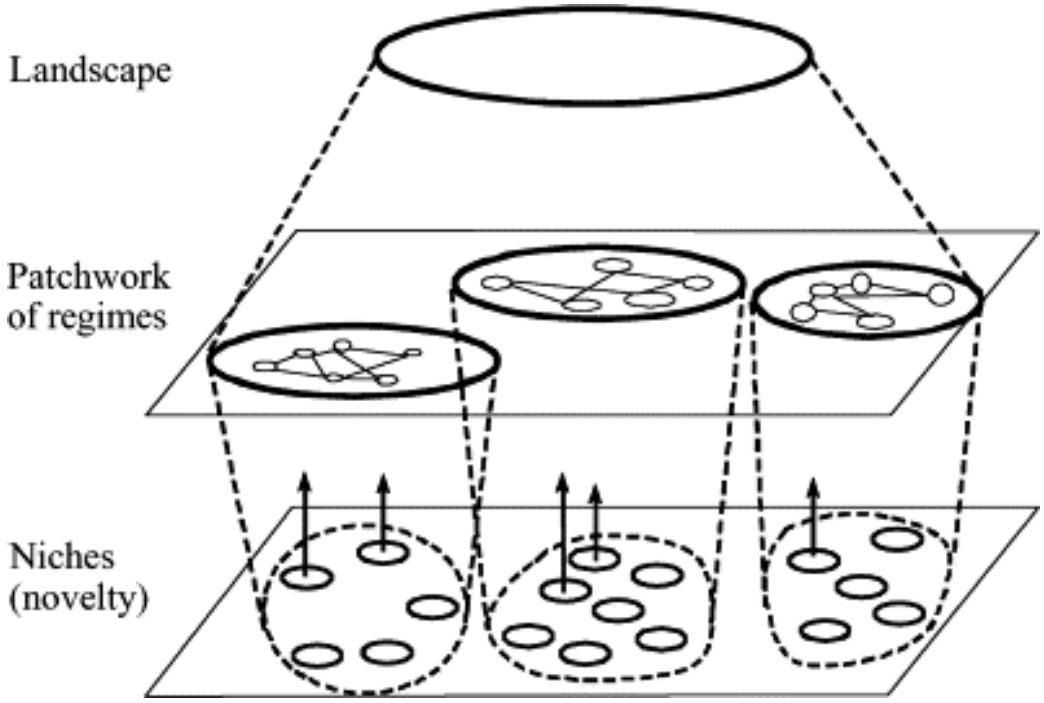
3.2 Sustainability Transition in Socio-technical Systems

In general, research on Sustainability Transition investigates long-term fundamental changes along different entangled dimensions of socio-technical systems. Sectors such as energy supply, water supply, and transportation can be considered as socio-technical systems, where they consist of networks of actors (individual and collective); social and cultural institutions; regulations, knowledge, and standards; market relations; and material, artifacts, and infrastructure (Geels, 2004a; Geels & Kemp, 2006; Markard et al., 2012; Smith, 2007). Transitions are long-terms fundamental changes that take place along these dimensions resulting in more environmentally- and/or socially-friendly modes of production and consumption (Elzen & Wieczorek, 2005; Geels, 2002; Geels et al., 2004; Geels & Schot, 2007; Kemp et al., 1998; Markard et al., 2012).

Applications of Sustainability Transition have risen among research communities with an increasing number of publications, dedicated journals, and special issues that address different aspects of transition (Farla et al., 2012; Fuenfschilling & Truffer, 2016; Kivimaa & Kern, 2016; Lachman, 2013; Markard et al., 2012; OECD, 2015; Turnheim et al., 2015). The key themes in the current research include policy design (Kivimaa & Kern, 2016; Voß, Smith, & Grin, 2009), actors in processes of transition (Farla et al., 2012), regional focused transitions (Berkhout, Angel, & Wieczorek, 2009), dynamics of sustainable innovation (Geels et al., 2008), and transitions in specific sectors (Schreuer, Rohracher, & Späth, 2010). A review by Markard et al. (2012) shows that a large number of publications are related to energy topics (36%), followed by transportation (8%), water and sanitation (7%), and food (3%). This distribution highlights the importance of research on areas such as agriculture and retail that is intertwined with most of the above-mentioned topics (Sutherland, Peter, & Zagata, 2015).

Socio-technical systems are described as consisting of three layers; niches, regimes, and landscapes in a nested hierarchy, as shown in Figure 3-1 (Bergek et al., 2008; Geels, 2002; Geels & Kemp, 2006; Lopolito et al., 2013; Seyfang & Longhurst, 2016). These three layers are also termed micro, meso, and macro levels in economic literature (Foster & Potts, 2006; Geels & Kemp, 2006) and are further discussed in this section.

Figure 3-1 Nested hierarchy of different layers in a socio-technical system



Source: (Geels, 2002, p. 1261)

Deep structures among actors, consisting of rules, common perceptions, knowledge, infrastructure, networks, and common practices, are called 'regimes' (Geels, 2002; Geels & Schot, 2007; Köhler, 2012; Nelson & Winter, 1982b; Rotmans, Kemp, & Asselt, 2001; Rotmans & Loorbach, 2009; Schot & Geels, 2008). The notion of a socio-technical regime stems from the concept of technological regimes, originated by Nelson and Winter (Geels, 2002; Kemp et al., 1998; Nelson & Winter, 1977), with socio-technical regimes extending to broader criteria such as sociological relations (Berkhout et al., 2004). Here, rules and institutions can be categorized as regulative (formal rules, laws, sanctions, incentive structures, rewards, and cost structures), normative (values, norms, role expectations, authority systems, and duties), and cognitive (priorities, problem agendas, beliefs, and bodies of knowledge) (Fuenfschilling & Truffer, 2016; Raven, 2006).

The stability of regimes results from linkages among varied elements, including actors that produce and reproduce those elements over time (Geels, 2002). These actors are bounded rationales (Bergek et al., 2008; Fuenfschilling & Truffer, 2014) who behave based on local rules and institutions, while simultaneously reconstructing them by their actions and through mutual dependency with other actors (Geels et al., 2004; Geels & Kemp, 2006). Habits, regulations, and past investments may create institutional pressures and make regimes' actors path-dependent (Bergek et al., 2008; Geels & Schot, 2007).

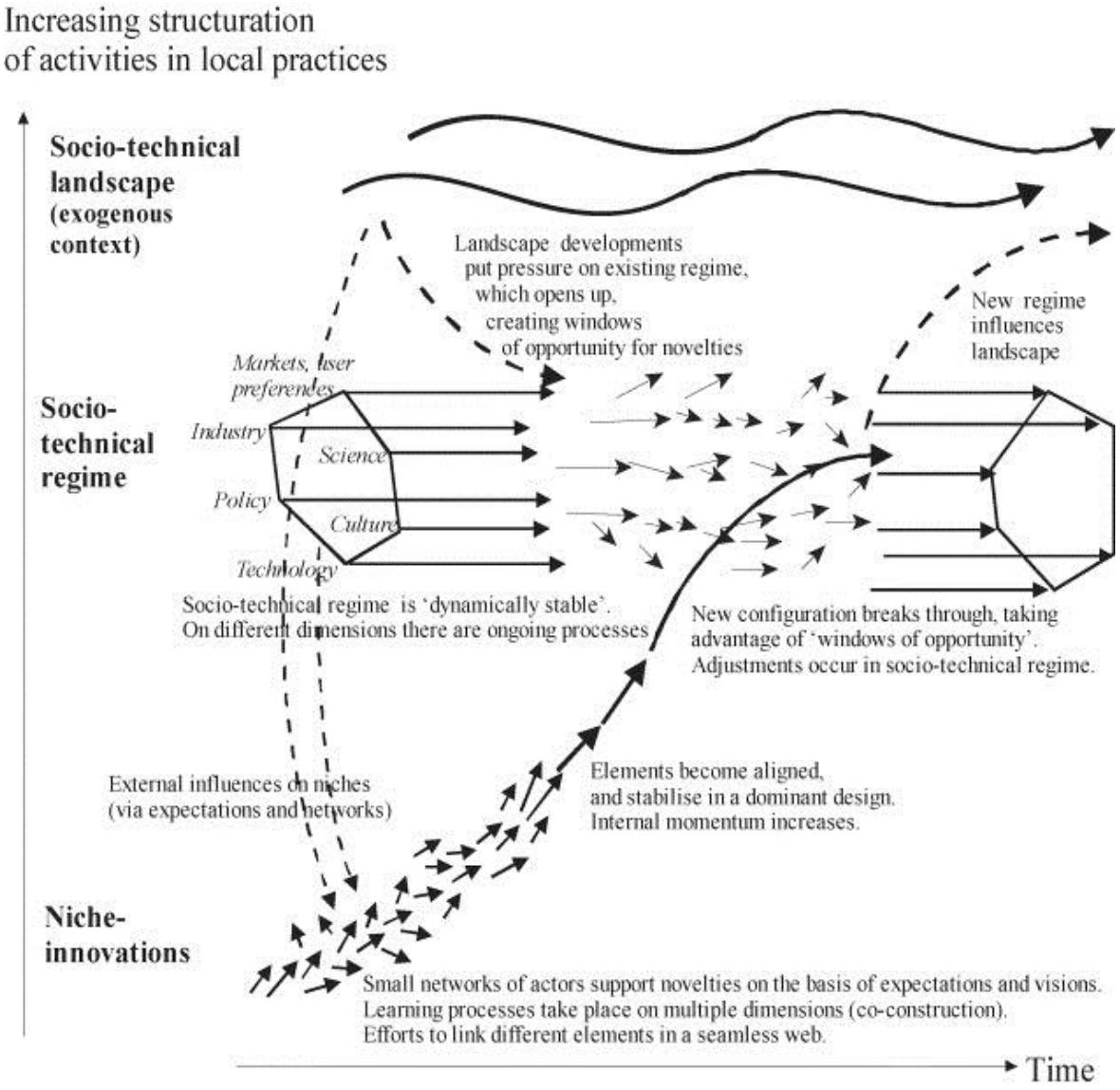
Consequently, most of the changes initiated within regimes are non-radical and aim for optimization of the current trends (Nelson & Winter, 1977; Raven, 2006); and cannot address sustainability issues that urge fundamental changes in current trends and practices. Multiple regimes can exist in one socio-technical system, however the Sustainability Transition literature has been criticized for not considering such dynamics (Kivimaa & Kern, 2016; Köhler, 2012; Raven, 2006; Sutherland et al., 2015). It is argued that Sustainability Transition research takes a 'monolithic' and 'homogenous' approach towards regimes, not considering tensions, and incoherencies within socio-technical systems (Fuenfschilling & Truffer, 2014).

While regimes represent stable norms and structures, niches play a pivotal role in the emergence of innovations (Fuenfschilling & Truffer, 2014; Geels, 2002; Geels & Schot, 2007; Markard et al., 2012; Raven, 2006). Actions at the niche level create new structures and initiate new trends that are required to address sustainability issues. These new structures and trends are unstable and perform poorly during early stages of their development (Fuenfschilling & Truffer, 2014; Geels, 2002; Geels & Schot, 2007; Kemp et al., 1998). They can be described as unstable potential regimes, which can become regimes when they attain stability (Fuenfschilling & Truffer, 2014; Raven, 2006). With this perspective, transitions can be defined as interplays among different degrees of structuration and flexibility between niches and regimes (Fuenfschilling & Truffer, 2014; Ratinen & Lund, 2016; Seyfang & Longhurst, 2016). Nevertheless, the boundary between stability and flexibility of structures is fuzzy, and research in this area has been criticized for lack of coherent practical description of stability (Fuenfschilling & Truffer, 2014). Research does not explain how dynamics between new trends and the more established structure work and how their interplay may result in stability of new niches and/or disruption of regimes (Kivimaa & Kern, 2016).

The most stable and long-lasting structures are categorized as landscape level. Socio-technical landscapes are exogenous environments beyond the direct influence of niche and regime actors (Geels, 2002; Geels & Schot, 2007; Lopolito et al., 2013). A socio-technical landscape includes aspects such as "*economic growth, broad political coalition, cultural and normative values, environmental problems, [and] resources scarcities*" while simultaneously incorporating "*large scale material context of society, e.g. the material and spatial arrangements of cities, factories, highways, and electricity infrastructures"*

(Geels & Kemp, 2006, pp. 231, 232). Landscape processes function on a wider context than the perspective of a socio-technical system (Berkhout et al., 2004) and alterations at the landscape level may create opportunities for fundamental changes in niches and regimes (Geels, 2004b; Lachman, 2013; Lopolito et al., 2013).

Figure 3-2 Conceptual representation of relationships among niche, regimes, and the landscape in a socio-technical transition



Source: (Geels & Schot, 2007, p. 401)

Figure 3-2 represents a conceptual model for relationships among niches, regimes, and their landscape. Radical innovations, developed within niches, experience difficulties breaking through the barriers between layers to alter dominant regimes (Geels, 2002; Lopolito et al., 2013; Seyfang & Longhurst, 2016). However, changes in the landscape may exert pressure on regimes and create windows of opportunity for innovative approaches

at the niche level to reach critical mass within the system, breaking through to the regime level (Geels, 2004b; Geels & Kemp, 2006; Kivisaari et al., 2013; Lachman, 2013; Lopolito et al., 2013).

Weaknesses in existing regimes, negative externalities of current methods, changes in user preferences, and competitive advantages of new approaches destabilize current institutional structures and facilitate such substitutions (Bergek et al., 2008; Geels, 2004b; Lopolito et al., 2013; Turnheim & Geels, 2013). Destabilization commences by doubting about suitability of current practices, continues by losing faith in existing norms, and results in eroding legitimacy of dominant regimes (Turnheim & Geels, 2013). Destabilization can be facilitated through policies (Kivimaa & Kern, 2016; Turnheim et al., 2015; Westley et al., 2011). Hence, one of the obstacles in Sustainability Transition research is to understand how sustainability innovations can be put into practice in socio-technical systems to solve persistent system problems (Adams, Jeanrenaud, Bessant, Denyer, & Overy, 2016; Elzen & Wieczorek, 2005; Geels et al., 2004; Nelson & Winter, 1977). Investigation of the dynamics for niche development and its translation to regimes is of great importance.

A wide range of actors are involved in the dynamics of niche development and socio-technical transitions including individuals (e.g. firms' owners, employees, and consumers), firms, policymakers, associations, and research institutes (Farla et al., 2012; Fuenfschilling & Truffer, 2016; Geels & Kemp, 2006). However, there is a shortage of research about actors' roles and strategies (Farla et al., 2012; Ratinen & Lund, 2016), and further investigation of individuals' behavior, incentives, and roles is required (Geels & Kemp, 2006). This falls within the aegis of research on actor-network theory, along with the application of agency theory and may help develop better insights in this area (Farla et al., 2012; Köhler, 2012). Both theoretical lenses are tangential to the approach employed in the present study, yet they are not employed as the main theoretical lens in this thesis. The thesis does not investigate how actors' networks form through time or how diverse ranges of agents alter in the process of change, however it investigates how various actors, involved in entrepreneurial actions, evaluate their participations and consider entrepreneurial actions as influential in socio-technical transitions.

Among different actors, entrepreneurs have been highlighted by the scholars in transitions (Bergek et al., 2008; Berkhout et al., 2004; Foster & Potts, 2006; Geels, 2004b;

Gibbs, 2006; Janssen & Moors, 2013; Kemp et al., 1998; Kivimaa & Kern, 2016; McKelvey & Holmén, 2006). This notion supports the arguments arising from an analysis of the sustainability-driven entrepreneurship literature and confirms the research gap recognized in Chapter Two from the perspective of Sustainability Transition. This alignment highlights the significance of research about entrepreneurship in socio-technical context, and emphasizes that a better insight about the dynamics of change at the niche level could help to interpret entrepreneurial roles and strategies, while at the same time potentially resulting in better decisions from policy makers and other actors in socio-technical systems (Kivimaa & Kern, 2016; Lopolito et al., 2013).

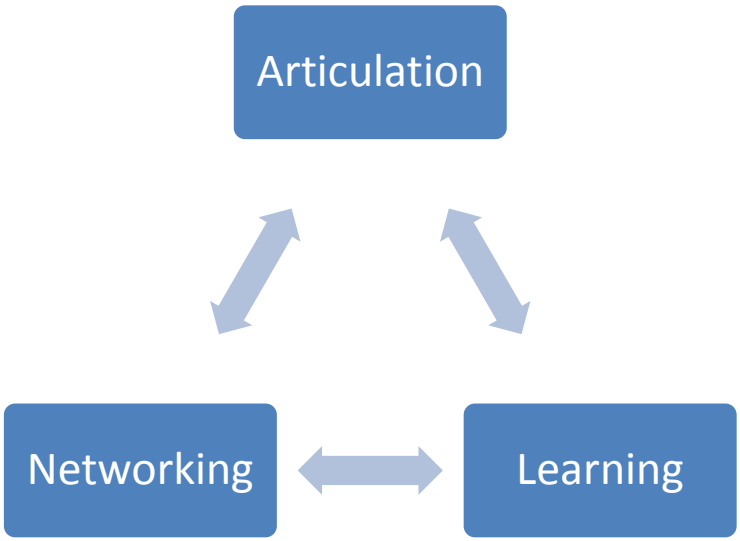
Sustainability Transition research investigates different aspects of the above-mentioned dynamics in four specific streams (Fuenfschilling & Truffer, 2014): (1) Transition Management (TM), (2) Strategic Niche Management (SNM), (3) Multi-Level Perspective (MLP), and (4) Technological Innovations Systems (TIS) (Lachman (2013); Markard et al., 2012). Recent literature has emphasized the first three (and the synergies among them), while TIS has been retained as it is considered to be a source for the first three (Lachman, 2013). This research locates sustainability-driven entrepreneurs within their socio-technical system and uses this literature to contextualize their actions. It explains how these people interact with other actors and utilize their resources to form strong niches that may scale up within the system to foster the creation of new trends at the regime level. Among the three current branches of research in Sustainability Transition literature, SNM focuses on the dynamics of niche development (Smith, 2007). Therefore, it is considered to be an appropriate overarching framework for this research and further explored in the following section.

3.2.1 Strategic Niche Management (SNM)

This section explores the research on niche development and niche-regime translations, which explains how activities at the niche level may stabilize and scale-up to change the norms and routines at the regime level. SNM aims to understand these dynamics to facilitate actions among actors and foster collective enactments (Geels et al., 2004; Schot & Geels, 2008). Learning, networking, and articulation of expectations are defined as fundamental procedures in the formation of a robust niche (Geels et al., 2008; Kemp et al., 1998; Lopolito et al., 2013; Markard et al., 2012; Raven, 2006; Schot & Geels, 2008),

which take place iteratively through several 'transition rounds' (Hegger et al., 2007; Ratinen & Lund, 2016) as shown in Figure 3-3 and further explored in this section.

Figure 3-3 The three processes constituting transition rounds



Source: Created from a description by (Geels & Raven, 2006)

Learning occurs in different dimensions of a socio-technical system, such as technologies, market and user preferences, cultural and symbolic meanings, infrastructure and maintenance networks, and regulations and policies. Learning could be about technological aspects such as artifacts and infrastructure, or it can happen within a context related to subjective meanings and the performance of new practices (Smith, 2007). It can be categorized into first- and second-order learning (Lopolito et al., 2013). While first-order learning modifies processes and instruments, second-order learning changes paradigms and mindsets (Argyris, 1976; Hegger et al., 2007; Lopolito et al., 2013), where the latter is essential to address sustainability issues in socio-technical systems.

Higher-order learning, or double-loop learning as it is known in management literature, occurs when assumptions, norms, and decision-making rules change among individuals, organizations, institutions, and collective actions. It happens as a result of self-evaluation (Brown & Vergragt, 2008; Brown, Vergragt, Green, & Berchicci, 2004), when feedback on accepted norms and interpretive frames shows that desired objectives are not being attained. The taken-for-granted norms would be reassessed and if necessary, would be replaced. Two factors considerably influence the effectiveness of learning: (a) availability of valid information for decision-making; and (b) openness to correcting actions through feedback processes (Argyris, 1976). Such feedback is more effective if supported by facts

and experiments (Kemp et al., 1998), and a sense of urgency may facilitate this process (Brown & Vergragt, 2008).

One way to create a feedback loop and facilitate higher-order learning is experimentation at a small scale (Brown & Vergragt, 2008; Brown et al., 2004; Heiskanen, Jalas, Rinkinen, & Tainio, 2015; Kivisaari, Lovio, & Väyrynen, 2004; Ratinen & Lund, 2016). A crucial factor for social learning in a process of diffusion is observation (Brown et al., 2004). Conceptualizing experimental projects at the niche level promotes interactions between variation and selection environments and provides opportunities for communication among diverse actors. Such projects create spaces for learning and articulation along different dimensions of a socio-technical system (Brown & Vergragt, 2008; Brown et al., 2004; Geels et al., 2008; Geels & Raven, 2006; Hegger et al., 2007; Ratinen & Lund, 2016). Experimental projects help participants to learn while influencing the diffusion of new methods as other actors learn through observation (Brown et al., 2004; Heiskanen et al., 2015). It develops a productive interaction between niches and regimes and highlights the roles that individual actors play to socially construct knowledge and meanings (Ratinen & Lund, 2016).

The more deeply an innovative action questions the fundamental basis of dominant regimes, the more difficult it would be to translate the corresponding new rules to the regime (Hegger et al., 2007; Smith, 2007), because for niches that are considerably different from dominant regimes, a substantial amount of positive feedback and evidence is necessary (Smith, 2007). Except in rare situations when new approaches totally substitute old methods, creating connections between old and new approaches fosters translations (Robertson & Gianmario, 2006), which may resolve bottle necks (problems in current trends and approaches) in dominant regimes (Berkhout et al., 2004). Development of multiple niches may result in uncertainty and complications in higher-order learning (Geels & Kemp, 2006).

Higher-order learning at different levels (individuals, professionals, business communities, and society) is essential to promulgate wider influence of new methods (Brown & Vergragt, 2008; Hegger et al., 2007; Smith, 2007). However, little research has been conducted into the process of learning between niche and regime levels (Brown & Vergragt, 2008; Brown et al., 2004), and there is not enough understanding about the process of breakthrough from innovative niches to regimes (Geels, 2002; Hegger et al.,

2007). Berkhout et al. (2004) argue that empirical applications of the regime concept are unclear and interactions between niches and regimes require further research. Although this notion is not the main focus of this research, the findings of this study clarify how entrepreneurial actions play a role in these translations.

Networking widens the influence of new practices and directs more resources towards new niches (Geels et al., 2008; Kemp et al., 1998; Markard et al., 2012; Schot & Geels, 2008). In this regard, Smith (2007) introduces institutional embedding as one of the dimensions for developing a strong niche. It is defined as the level of support in terms of complementary technologies and innovations (Holmén, Magnusson, & McKelvey, 2006). Forming a stable social network is necessary for facilitating the access to resources and their mobilization (Lopolito et al., 2013). When this network grows and becomes stable, powerful actors join and bring more resources. Diversity of actors and involvement of powerful actors facilitate the formation of niches (Ratinen & Lund, 2016).

Finally, shared visions also have to emerge around diverse dimensions of socio-technical systems (Kemp et al., 1998; Lopolito et al., 2013). Shaping of expectations and finding shared visions is part of a bottom-up strategy that influences the legitimacy of new practices and gives directions to future developments (Bergek et al., 2008; Seyfang & Longhurst, 2016). The greater the complexity of the situation (in terms of range and number of actors), the more difficult it is to achieve shared meanings (Brown et al., 2004). Lack of shared visions may result in low legitimacy among important stakeholders (Bergek et al., 2008; Lopolito et al., 2013).

Finding shared visions and collective cognitive rules may outline specific directions for learning, thereby resulting in more effective learning and attract more attention, accompanied by further resources (Berkhout et al., 2004; Geels & Raven, 2006; Lopolito et al., 2013). In turn, learning advances knowledge about new practices and influences the shared meaning among actors in socio-technical systems (Brown et al., 2004; Geels et al., 2008). Positive feedback from learning creates general and abstract rules and refines expectations among the actors to make the knowledge about new practices more detailed and robust (Geels & Raven, 2006).

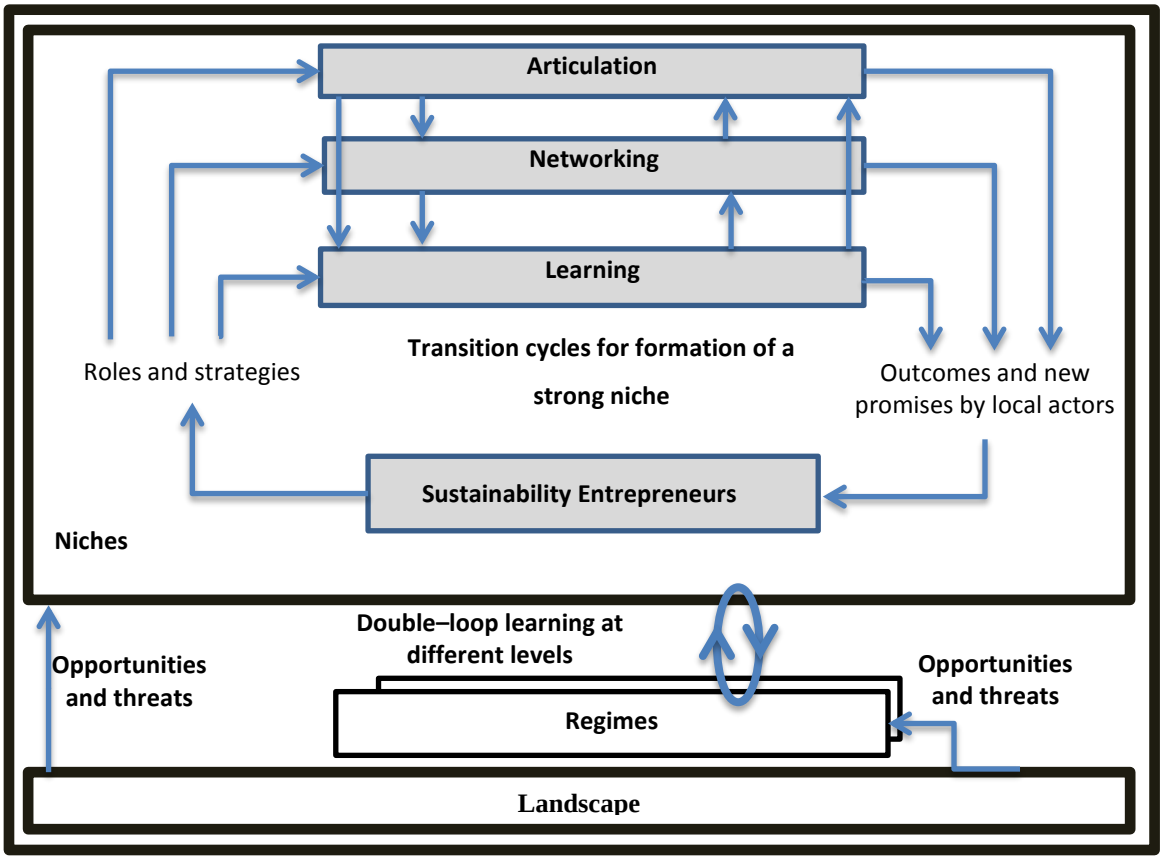
Transformation of local outcomes into more general abstract rules requires aggregation activities such as standardization, codification, model building, and documentation of best

practices (Geels & Raven, 2006). It is argued that unclear expectations, divergence among actors, incomprehensive local projects, and focusing on technical aspects (insufficient attention to social interactions) are the main reasons for failure of a niche (Geels & Raven, 2006). Hence, a clear picture of interactions at micro level may help decision-makers to have better policies in order to foster desirable transitions by enhancing learning, networking, and articulation processes.

While the application of SNM demonstrates a better understanding about the formation of niches and their influences on the socio-technical system, growing empirical research emphasizes contextualization (Geels & Kemp, 2006; Geels & Raven, 2006; Lopolito et al., 2013; Ratinen & Lund, 2016; Raven, 2006). Literature on SNM has been criticized for being focused on novelty and internal processes of niche development and not considering the effect of the ongoing process in landscape and regimes (Berkhout et al., 2004; Breslin, 2008; Geels, 2002; Witkamp, Raven, & Royakkers, 2011) where selection criteria are defined (Ratinen & Lund, 2016). It is argued that neither regime level investigation nor actors examinations result in a comprehensive image of changes and that the two levels have to be combined to offer better understandings about change (Geels & Kemp, 2006; Pel, 2014). Literature on multi-level perspectives offers an appropriate framework for such embedding (Geels, 2002; Schot & Geels, 2008) and allows this thesis an appropriate framework for a multi-level investigation.

As discussed in Chapter Two (abstracted in Figure 2-7), this research examines sustainability-driven entrepreneurs within their context. Considering the literature in transition theory and the above-mentioned discussion, the model presented in Chapter Two (Figure 2-7) can be expanded to a more comprehensive model shown in Figure 3-4 using SNM as a process model for niche development and MLP literature for contextualization. Thus, this research investigates roles and strategies that sustainability-driven entrepreneurs have in the process of niche development that addresses the first research question. It also considers the characteristics of the landscape and regime levels, which may create opportunities and threats for actors either at niche or regime level, to address the second research question in the thesis. Invetigating the interactions with actors in the above-mentioned dynamics addresses the third research question.

Figure 3-4 Contextualizing sustainability-driven entrepreneurship using SNM and MLP lenses



Source: Author's own (Abstracted from literature)

Figure 3-4 explains the dynamics for the formation of a strong niche and its breakthrough in a socio-technical system that may change the dominant trends at the regime level, focusing on entrepreneurial roles and strategies. It shows that during different transition cycles (learning, networking and articulation) a robust niche forms that may translate to the dominant regime through double-loop learning. As discussed earlier in this chapter, double-loop learning takes place when current trends are reevaluated by actors at the regime level. Moreover, landscape changes and regime externalities may create opportunities and threats that may foster niche-regime translation.

While the above-mentioned model offers a suitable framework for examining the dynamics and processes of niche formation, it does not have the necessary requirements to explain interactions among actors. An appropriate theoretical lens is required to explain actions and strategies at individuals' and organizational level. Frameworks such as organizational change and agency theory can contribute to this area of knowledge by bringing the necessities to understand actors' roles and strategies. In this research,

Evolutionary Theory of Organizational Change is used to explain these interactions. The reasons for this choice and further details of this theory are discussed in the following section.

3.2.2 Evolutionary Theory and Strategic Niche Management

Different theories can be employed in conjunction with Sustainability Transition Theory in order to interpret diverse aspects of change (Belz, 2004; Fuenfschilling & Truffer, 2014; Geels, 2004b; Lachman, 2013; Markard, Wirth, & Truffer, 2016). Evolutionary Theory is a particularly significant contributor to transition literature (Safarzyńska et al., 2012; Schot & Geels, 2007); it is compatible with the journey metaphor adopted in this research as an appropriate approach for conceptualizing change towards sustainability (Garud & Gehman, 2012; Geels et al., 2008; Holling, 2000). This section discusses how Evolutionary Theory of Organizational Change is an appropriate lens in this research to explain the interactions at actors' level.

Evolutionary Theory has been used in a number of disciplines such as anthropology, social science, and cultural change (Nelson, 2006). Literature on this topic has been continuously developing since the mid-twentieth century (Abatecola, 2014). Different directions of research are evident from researchers who consider evolution as a result of natural selection and adaptation of organizations to environment (Hannan, 2007), to scholars who believe in strategic choices of actors and intended changes like strategic choice theory (Van de Ven & Poole, 2005).

None of these approaches alone can bring an inclusive image of evolution (Foster & Potts, 2006) and considering both perspectives together provides a better understanding of this complex research domain (Abatecola, 2014; Hrebiniak & Joyce, 1985). This notion was also discussed in entrepreneurship literature in Chapter Two. Considering entrepreneurs either as heroic change-makers or adaptive actors to their surrounding environment portrays a similar perspective. It was also argued that taking a middle ground between these two extreme positions brings about a more realistic picture. Sustainability Transition literature embraces the latter approach and explains evolutions as the interplay between actors' intentions and contextual constraints.

For example, Geels (2002) identifies two different evolutionary processes in socio-technical systems: (1) variation, selection, and retention; and (2) creating new

combinations. This duality is named the 'quasi-evolutionary' model (Hegger et al., 2007; Schot, Hoogma, & Elzen, 1994). In the first process, selection is equivalent to adoption, which is driven by market and economic rules (Foster & Potts, 2006), while for the latter, selection is domestication of new approaches and might be influenced by the wider environment including policies, institutions, habits, and cultural norms (Foster & Potts, 2006; Geels, 2002). The quasi-evolutionary theory believes that variation is not always blind and it could be intended to some extent. Actors in socio-technical systems have some understanding about future directions. They intend to form a future, considering variation criteria and their strategic choices such as research and development (Kemp et al., 1998; Schot & Geels, 2008). In order to have a comprehensive explanation about interactions at the micro level this research has to employ a version of the evolutionary framework that addresses these requirements.

'General Darwinism' theory can be used to explain dialectical perspectives and contribute to explaining the quasi-evolutionary models in socio-technical transitions by compromising both perspectives in a coherent whole. Two streams of research are identified in general Darwinism. The first stream of research has been shaped inductively through time when dynamics of empirical research are explained by evolutionary description. Similarities with biological evolution have helped shape these ideas. The second stream explains evolution in social sciences based on the findings from biological sciences (Aldrich et al., 2008; Dawkins, 2006; Nelson, 2006). Applications of the latter for explaining social phenomena have been criticized, as concepts such as memes, replicators, and interactors from biology cannot fit into evolution in social and cultural contexts (Foster & Potts, 2006; Nelson, 2006). More flexible forms of Evolutionary Theory, which acknowledge the differences between cultural and social evolution versus biological evolution, are more advantageous (Nelson, 2006). Hence, a more flexible approach is employed in this research.

The selected version of Evolutionary Theory in this research is a general approach for understanding social alteration, which investigates change at different levels (individuals, corporations, and collectives) through the process of variation, selection, retention, and struggle as shown in Table 3-1. It can be an overarching framework for other organizational theories such as institutional theory, resource-based theory, and organizational learning (Aldrich & Martinez, 2001; Aldrich & Ruef, 2006). This theory

investigates the genesis of organizations and clarifies how organizations emerge through populations and communities (Aldrich & Martinez, 2001; Aldrich & Ruef, 2006), which is an area of research that needs further attention and still is under development (Fiol & Romanelli, 2012; Forbes & Kirsch, 2011; Suddaby & Greenwood, 2005). It explains how variations across organizations may scale up to change current populations and communities of organizations or form new ones.

Table 3-1 Evolutionary process

Process	Definition
Variation	Change (departure) from current routines and competencies; change in organizational forms • Intentional: occurs when people actively attempt to generate alternatives and seek solutions to problems • Blind: occurs independently of conscious planning
Selection	Differential elimination of certain types of variations • External selection: Forces external to an organization that affect its routines and competencies • Internal selection: Forces internal to an organization that affect its routines and competencies
Retention	Selected variations are preserved, duplicated, or otherwise reproduced
Struggle	Contest to obtain scarce resources because their supply is limited

Source: (Aldrich & Ruef, 2006, p. 17)

As discussed in Chapter Two, this study focuses on particular entrepreneurs that commence their businesses by departing from current trends and applying sustainability innovations to the core of their businesses. These entrepreneurs are subgroups of 'nascent entrepreneurs' in Evolutionary Theory (Aldrich & Martinez, 2001; Davidsson, 2006). A nascent entrepreneur is someone "*who initiates serious activities that are intended to culminate in a viable organization*" (Aldrich & Ruef, 2006, p. 65), which is one of the sources of variation across organizations (Aldrich & Fiol, 1994; Aldrich & Martinez, 2010, 2015; Aldrich & Ruef, 2006; Katz & Gartner, 1988). Nascent entrepreneurs can be positioned in a continuum between reproducers and innovators (Aldrich & Kenworthy, 1999; Aldrich & Martinez, 2001). Innovative activities of entrepreneurs can be categorized into competence-enhancing, competence-extending, and competence-destroying. Competence-enhancing and/or competence-extending improves or builds on the current trends and capabilities, while competence-destroying innovation needs to create

knowledge and routines around new practices (Aldrich & Martinez, 2010) and fundamentally alter the competencies for an organization (Aldrich & Ruef, 2006)

Competence-destroying entrepreneurs may act as a spark for the formation of new organizational forms and may scale up to create new organizational populations and communities (Aldrich & Kenworthy, 1999; Aldrich & Martinez, 2010; Johnson, Dowd, & Ridgeway, 2006; Tracey et al., 2011; Zhang & White, 2016). An organizational form is *"a set of rules that patterns social interaction between members, facilitates the appropriation of resources, and provides an internally and externally recognized identity for an organization"* (Aldrich & Ruef, 2006, p. 114). Organizational forms "*represent classes of organizations that audiences understand to be similar in their core features and distinctive from other classes of organizations*" (Fiol & Romanelli, 2012, p. 597). Examples of organizational forms include "universities" and "hospitals" (Aldrich & Ruef, 2006, p. 114); within this research, "large retail shops" represent an established organizational form, while "biodynamic wine producers" represent a novel organizational form. This research, by definition, is focused on competence-destroying entrepreneurs. As explained in Chapter Two, sustainability-driven entrepreneurs need to make fundamental departures from current trends and routines to address sustainability issues and facilitate the change in their socio-technical systems, which happen through radical innovations and competence-destroying activities.

Evidence shows that trends favor the imitation process, because what is established as 'truth' in society justifies possible versus impossible, wrong versus right, and worthy versus unworthy (Aldrich & Kenworthy, 1999; Aldrich & Martinez, 2010; DiMaggio & Powell, 1983; Katz & Gartner, 1988; Tracey et al., 2011). Hence, most of the entrepreneurs reproduce existing forms of organizations and only a small proportion of entrepreneurial activities (founding a business) can be considered as innovative (Aldrich & Martinez, 2010, 2015; DiMaggio & Powell, 1983). Nonetheless, innovation still occurs, since people do not act as machines and history has shown that innovation helps humans with their adaptation and survival (Aldrich & Martinez, 2001; Aldrich & Martinez, 2010). These variations could be initiated intentionally or blindly (accidentally) (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006; Davidsson, 2006), however the evaluation of their novelty is based on the outcomes and not by the intention for variation (Aldrich & Martinez, 2001; Aldrich & Ruef, 2006).

Yet, motivation of entrepreneurs plays an important role for persistence and developing internal legitimacy in their organizations (Aldrich & Kenworthy, 1999; Davidsson, 2006; Drori & Honig, 2013). This notion was also discussed in Chapter Two of this thesis, where entrepreneurs as people were separated from entrepreneurial processes. Entrepreneurial passion helps entrepreneurs to be persistence pursuing their goals, and build strong identities. However, their wider influence and creation of variations across organizations depends on the dynamics between these new entities and their business environment. Innovative entrepreneurs who create new forms of organizations, for whatsoever reasons, have to work with each other to develop a more favorable context while they sustain their survival (Powell & Sandholtz, 2012; Suddaby & Greenwood, 2005). They have to employ different strategies to overcome their liability of newness (Aldrich & Yang, 2012; Shepherd, Douglas, & Shanley, 2000; Stinchcombe, 1965) which is defined as '*complex challenges that limit their viability, including managing relationships among strangers, assembling required resources quickly, and coping with difficult environments*' (Aldrich & Yang, 2012, p. 2157).

Nascent entrepreneurs have to create definitions and define their boundaries to differentiate themselves from other dominant trends (Aldrich & Yang, 2014; Khaire, 2014; Suchman, 1995). They may get involved in the creation of organizational populations and communities (Aldrich & Martinez, 2010) and have to acquire resources and utilize their social networks for this purpose. This is identified as one of the characteristics of emerging organizations, that are defined by four properties: intentionality, resources, boundary, and exchange (Aldrich & Martinez, 2001; Brush, Manolova, & Edelman, 2008; Katz & Gartner, 1988), further discussed in the following sections.

3.2.2.1 Entrepreneurial Resources

This section discusses entrepreneurial resources, because entrepreneurial strategies are highly dependent on types and availability of resources including social networks, knowledge, employees, and financial capital among others. Nascent entrepreneurs rely on their personal networks when they start their businesses, and construct new ones along the way to acquire knowledge and other resources (Aldrich & Ruef, 2006; Davidsson, 2006; Powell & Sandholtz, 2012). These social networks have two complementary characters: heterogeneity or diversity, and affective or emotional strength (Aldrich & Martinez, 2015; Aldrich & Ruef, 2006).

Beside the networking efforts, a startup process can be understood by identifying how a business founder obtains and uses knowledge (Aldrich & Ruef, 2006; Aldrich & Yang, 2014). Knowledge of new needs and contextual expertise in associated fields facilitate entrepreneurial actions (Agarwal & Shah, 2014). There is a positive correlation between level of education and becoming an entrepreneur (Davidsson, 2006). Nascent entrepreneurs form new organizations and translate their sources of knowledge to organizational knowledge that is defined as "*the routines and competencies that are specific to an organization activity system*" (Aldrich & Ruef, 2006, p. 77).

Knowledge can be gained through work experience, consultation with experts, or imitation from existing organizations. Nascent entrepreneurs gain knowledge through experience, and by developing a business they give structure to this personal knowledge (Agarwal & Shah, 2014; Davidsson, 2006; Powell & Sandholtz, 2012). Those structures can be used to create forms and meanings (Aldrich & Ruef, 2006; Aldrich & Yang, 2014), which might be called '*schemata*'. Previous work experience may constrain the entrepreneurial perspective for searching for out-of-the-box opportunities. It influences the entrepreneurial actions in three different ways: (1) through previous contacts; (2) through organizational or industry-specific knowledge; and (3) through the culture of an occupation or community.

Most of the information needed for creating an organization is available in the memory of nascent entrepreneurs and people who are working with them (Aldrich & Ruef, 2006). However, experts' advice and consultancy may substitute previous experience for nascent entrepreneurs. It connects them with the available tacit knowledge among experts. Nascent entrepreneurs usually use their personal networks, especially weak ties within their industry, to gain knowledge. They may also imitate from other organizations, which may happen in three different ways: (1) copying from most frequent routines; (2) copying from dominant or high-status organizations; or (3) copying from organizations that have better performance and outcomes, or seems to be more successful (Aldrich & Ruef, 2006).

Nascent entrepreneurs also learn during their startup process. They learn by doing and experimenting. Entrepreneurs with more effective heuristics may learn faster from feedback during this time (Aldrich & Yang, 2014; Davidsson, 2006). They usually have to make decisions under time pressure. The short time-frames between action and feedback during the process of business development provide more opportunities for learning

compared to established organizations. These improvisations may also create opportunities for blind variations. Depending on the source of knowledge, nascent entrepreneurs may be encouraged towards imitation; for example advice from experts puts pressure on entrepreneurs to sustain traditions (Aldrich & Ruef, 2006).

The organizational knowledge will be used by entrepreneurs for issue-framing to convince other actors, and act as a symbol for legitimization. They use symbols, rituals, and language to support their new activities. Framing issues creates new schemata, which has a powerful psychological effect. These frames have to be abstract and broad enough to be inclusive and consider all the variations. Nascent entrepreneurs use different strategies in this regard at different stages of evolution to legitimize and institutionalize their new approaches, further discussed in the following section.

3.2.2.2 Entrepreneurial Roles and Strategies

This section discusses how nascent entrepreneurs are influential in the formation of new populations and communities, which may form strong niches and result in wider effects of new practices at system levels. As people who are considered pioneers in their local settings, nascent entrepreneurs may face different forms of challenges compared to the ones who continue on the previous trends in an industry. They may need to overcome their liability of newness (Djupdal & Westhead, 2015; Shepherd et al., 2000; Stinchcombe, 1965; Zhang & White, 2016). These challenges include lack of legitimacy, non-existence of a market, and untrained employees (Aldrich & Fiol, 1994; Human & Provan, 2000; Johnson et al., 2006; Katz & Gartner, 1988; Khaire, 2014; Markard et al., 2016; Weber, 1978).

Aldrich and Fiol (1994) introduce lack of legitimacy as the main issue for entrepreneurs. '*Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions*' (Suchman, 1995, p. 574). Two forms of legitimacy are defined (1) cognitive, which is defined as "*how taken for granted a new form is*"; and (2) sociopolitical, which is defined as "*the extent to which a new form conforms to recognized principles or accepted rules and standards*" (Aldrich & Fiol, 1994, pp. 645-646). Considering actors as 'bounded rationales', who make decisions under uncertainty, emotional influence, and local information (Breslin, 2008; Foster & Potts, 2006; Geels, 2004b), highlights the crucial roles of local cognitive and social norms (Bergek et al., 2008; Powell & Sandholtz, 2012) and gaining legitimacy in these dimensions.

Cognitive legitimacy is about creating and spreading knowledge of new practices. It is about changing the perceptions among people in a sector and what they consider as 'taken-for-granted' (Aldrich & Fiol, 1994; Khaire, 2014; Markard et al., 2016). It usually takes place at the early stages of development when new practices become accepted as legitimate substitutes to incumbents (Bergek et al., 2008). The level of cognitive legitimacy around a method can be assessed by the level of public knowledge available on that specific activity. The highest level of cognitive legitimacy would be achieved if an approach or a new practice were to become 'taken-for-granted' (Aldrich & Fiol, 1994; Johnson et al., 2006; Suddaby & Greenwood, 2005). From the producers' point of view, cognitive legitimation means new entrants may copy those trends, and from the consumers' perspective cognitive legitimacy means they are knowledgeable about products and services (Aldrich & Fiol, 1994; Khaire, 2014). Finding cognitive legitimacy is the most difficult aspect of creating new organizations and organizational populations for innovator entrepreneurs (Aldrich & Martinez, 2010). It can be explained as:

> *Cognitive legitimacy [Italic in the source] refers to the acceptance of a new kind of venture as a taken for granted [Italic in the source] feature of the environment. The highest form of cognitive legitimacy exists when a new product, process, or service is accepted as part of the sociocultural and organizational landscape (Aldrich & Martinez, 2010, p. 396).*

On the other hand, sociopolitical legitimacy shows that "*key stakeholders, general public, key opinion leaders, or governmental officials accept a venture as appropriate and right, given existing norms and laws"* (Aldrich & Fiol, 1994, p. 648). New activities may not be able to rely on existing institutions for external legitimacy (Aldrich & Fiol, 1994; Gustafsson, Jääskeläinen, Maula, & Uotila, 2015; Markard et al., 2016) and entrepreneurs have to modify the institutions or create new ones to make them more aligned with their objectives. Social context may also create windows of opportunity, which may eventually result in a change in knowledge, rules, and institutions through the process of social construction (Aldrich & Fiol, 1994; Gustafsson et al., 2015). Sociopolitical legitimacy can be explained as:

> *the acceptance by key stakeholders, the general public, key opinion leaders, and government officials of a new venture as appropriate and right. It contains two components: moral acceptance [Italic in the source], referring to conformity with cultural norms and values, and regulatory acceptance [Italic in the source], referring to conformity with governmental rules and regulations (Aldrich & Martinez, 2010, p. 396).*

Development of sociopolitical and cognitive legitimacy occurs at different levels. Legitimate practices create positive feedback and foster double-loop learning among actors. If contextual factors nurture the adoption of these legitimate practices, they may scale up to change the dominant regimes and form new populations of organization. Nascent entrepreneurs may employ diverse strategies and play different roles to facilitate this process. The question of how sociopolitical and cognitive legitimacy can be accurately measured constitutes a fascinating question that is outside the scope of this thesis, and is left for future research.

As explained earlier, most of the knowledge for new practices and organizational forms is un-codified. It is held initially by entrepreneurs and then by their employees, and is not accessible for others to use and understand (Aldrich & Fiol, 1994; Drori & Honig, 2013; Gustafsson et al., 2015). One of the most important roles of the entrepreneur, especially in the beginning of their action in their sector, is to learn and develop knowledge about their new practices by doing (Aldrich & Martinez, 2010; Aldrich & Yang, 2014). They have to develop the knowledge of how, what, and who for different procedures in their businesses, which eventually form the procedural, declarative, and transactive memory (Aldrich & Yang, 2014). It results in internal legitimacy which can be defined as:

> *the acceptance or normative validation of an organizational strategy through the consensus of its participants, which acts as a tool that reinforces organizational practices and mobilizes organizational members around a common ethical, strategic or ideological vision (Drori & Honig, 2013, p. 347).*

After this gestation period, entrepreneurs have to persuade and convince other actors in the business environment in order to find cognitive legitimacy and gain access to more resources (Aldrich & Fiol, 1994; Suchman, 1995). They may use symbolic tools to hook to legitimate established institutions in their business environment so as to legitimize their new practices (Suddaby & Greenwood, 2005). Nascent entrepreneurs have a crucial role in creating trust about their new practices among other stakeholders in their business environment (Drori & Honig, 2013). The process of trust–building occurs through a self-reinforcing loop by creating a sense of self-satisfaction for founders (Gambetta, 2000), which helps them to overcome social barriers to their innovative actions (Aldrich & Fiol, 1994, p. 663).

Because externally-validated knowledge is not available for new practices; nascent entrepreneurs have to employ other forms of communications. Approaches, such as stories and narratives, are used to associate new activities to wider acceptable norms (Aldrich & Fiol, 1994; Suddaby & Greenwood, 2005). Entrepreneurs use storytelling to describe their actions and justify their practices, while these actions may contradict with the institutional logic in their business environment (Suddaby & Greenwood, 2005). Stories can become a major conduit of communication with wider audiences especially in situations where scientific evidence is not available and the matter of discussion is subject to interpretations (Suddaby & Greenwood, 2005). Validity of a story rests on how well the story is narrated, because to the social world the relative meanings of 'truth' for entrepreneurs could be quite different from the norms in their business environment. If entrepreneurs can transfer knowledge from other examples available across populations, they can base their initial trust-building strategies on that evidence (Aldrich & Martinez, 2010).

The nature of a new practice may indicate if it is imitable or not; innovative activities that can be protected by legal instruments such as patents and copyrights, or that are difficult to understand unless by trial and error in practices, are difficult to imitate. The more imitable practices are more likely to form collective actions. It may also become problematic because it brings more competitors into the market (Aldrich & Fiol, 1994; Aldrich & Martinez, 2010; Holmén et al., 2006). Usually, after the initiation of a radical innovation, a period of disorder may spark, during which different design methods develop (Aldrich & Martinez, 2010; Gustafsson et al., 2015; Tushman & Anderson, 1986). This time of disorder ends if participants can decide on a dominant design or a shared meaning, which is deeper than merely cognizance on definitions (Aldrich & Martinez, 2010; Khaire, 2014; Tushman & Anderson, 1986). A dominant design of legitimate new practices may be adopted by other organizations and form a bigger population, which in-turn enhances the level of legitimacy for new practices (McKendrick & Carroll, 2001). In this stage, nascent entrepreneurs may become facilitators of collective actions.

Aldrich and Ruef (2006) argue that entrepreneurs play an important role in forming their desired populations by their strategic choices. They believe collective actions of powerful actors may take the lead regarding access to resources among organizations. Furthermore, they also suggest that these collective actions may not be conducted

intentionally; cumulative effects of self-aware individuals, who act similarly, can be substantial enough to bring about systemic changes (Aldrich & Ruef, 2006). Initial collective actions and networking happens, in an informal way, among the network of entrepreneurs, and later it may become more formal in the form of strategic alliances such as trade associations (Aldrich & Fiol, 1994).

Forming collective actions such as trade associations highly influences the process of cognitive legitimacy (McKendrick & Carroll, 2001). Industry champions who step in as volunteers to form these collective actions may act as catalysts (Aldrich & Fiol, 1994; Fiol & Romanelli, 2012). These collective actions may function as a powerful actors and get involved in institutional entrepreneurship to change the rules and regulations (Bergek et al., 2008). Several conditions may hamper the effort of forming collective actions for new practices such as (1) divergent in design and knowledge of new practices (which may result in different competitive groups), or (2) conflicts among subgroups, which may cause confusion and uncertainty. These conditions would reduce the chance for champions to form a coalition (Aldrich & Fiol, 1994; McKendrick & Carroll, 2001). In this regard promoting new activities through third-party associations may foster the trends towards cognitive legitimacy (Aldrich & Fiol, 1994).

Innovative entrepreneurs have to cooperate to build new markets. However, through this process tension may arise among entrepreneurs and lead them to competition rather than cooperation, as each business wants to gain the most profitable segment(s) of their emerging market (Aldrich & Martinez, 2010). This cooperation may find different qualities for socially- and environmentally-driven entrepreneurs (Dart, 2004; Forbes & Kirsch, 2011). Forming collaboration, collective marketing, and lobbying may help them to find sociopolitical approval (Aldrich & Fiol, 1994; Forbes & Kirsch, 2011), while at the same time their initial legitimacy is essential to commence cooperation (Forbes & Kirsch, 2011). Entrepreneurs who act totally independently and autonomously may face serious obstacles and efficient collective actions may change the result from failure to success (Aldrich & Martinez, 2010).

Collective actions act as a vehicle to search for institutional legitimacy and support (Aldrich & Fiol, 1994; Tracey et al., 2011). Negotiations between pioneer entrepreneurs and established industries create sociopolitical legitimacy for the new population (Aldrich & Fiol, 1994; Forbes & Kirsch, 2011). Some of the signs for regulatory acceptance are passing

laws in support of new methods and allocation of subsidies for the new industry (Aldrich & Martinez, 2010). Absence of attack by religious and civic leaders, and public prestige for the frontrunners of new practices can be considered as signs of moral legitimacy (Aldrich & Martinez, 2010). New methods may expand across other populations and form organizational communities, which are defined as '*a set of coevolving organizational populations joined by ties of commensalism and symbiosis through their orientation to a common technology, normative order or legal-regulatory regime*' *[Italic in the source]* (Aldrich & Martinez, 2010, p. 408).

Feasibility of developing communities depends on their cognitive and sociopolitical legitimacy. Perceived value from the core products and services of a community also influences its viability (Aldrich & Ruef, 2006). For example, the government may look at these criteria to make decisions about new communities as supporters or as overseers. Dependency among different actors and organizations across communities enhances legitimacy and foster learning process. Mutual dependency of actors would give these activities a collective spirit, which make them more influential on standards and regulations, than isolated efforts of individual actors (Aldrich & Ruef, 2006). Collective actions of entrepreneurs facilitate the learning process at community level. While individual entrepreneurs may find legitimacy based on their own actions, legitimacy at population and community levels is highly dependent on the collective actions of actors. Hence entering into a fully competitive relationship may cause problems for population and community level legitimacy (Aldrich & Ruef, 2006). Governmental support plays an important role in the formation of new communities with specifically two important roles: (1) support for research; and (2) enforcement of new laws (Aldrich & Ruef, 2006).

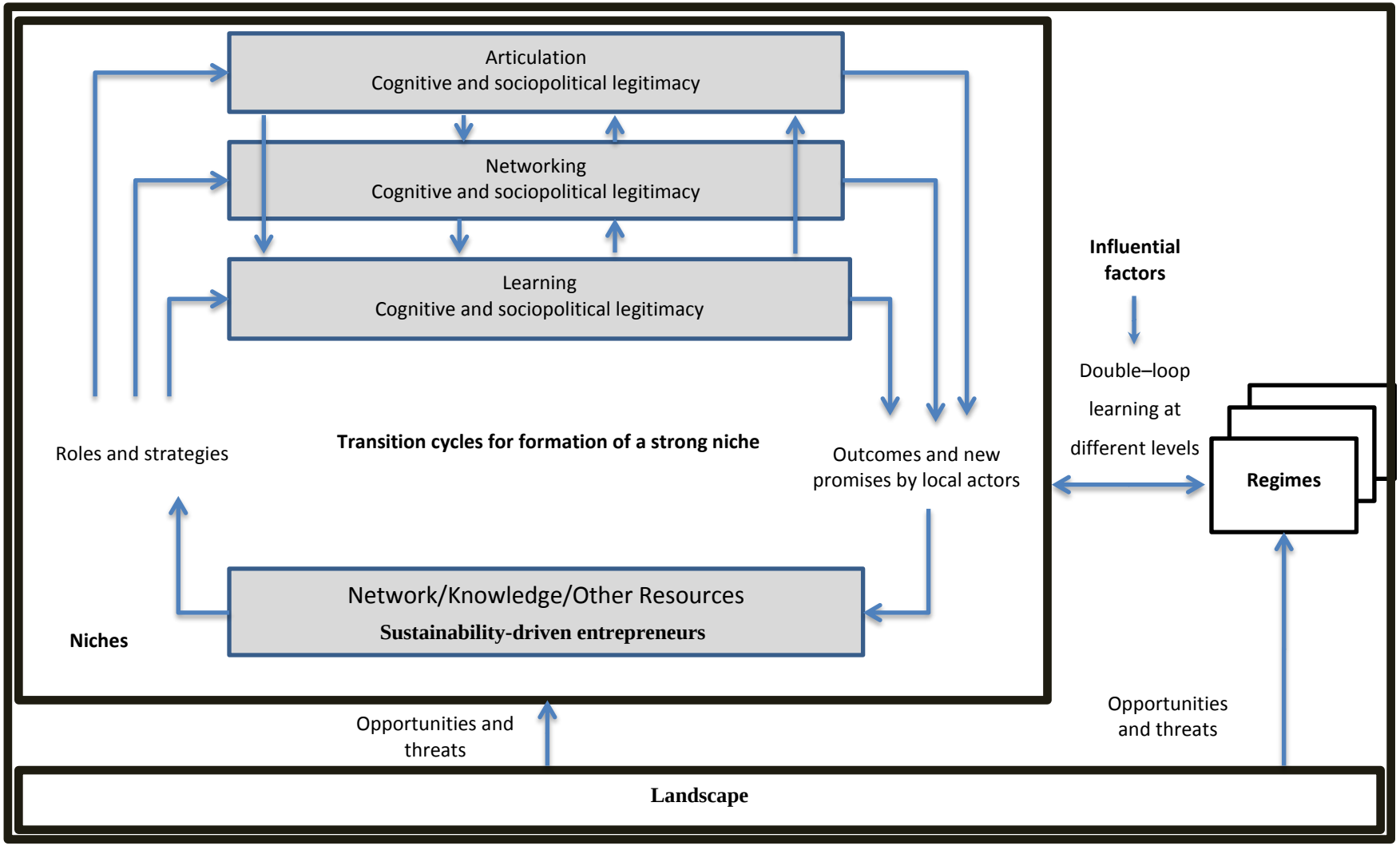
As mentioned in this section, entrepreneurs utilize different strategies to legitimize their new practices and form new populations. They may facilitate collective actions and employ collective strategies to pursue their goals. Their actions may result in fundamental changes in current populations or create new populations based on different competencies. These notions and explanations at actor and individual levels can be combined with systemic perspectives in SNM and MLP literature to bring about a better understanding of the processes of change.

3.3 CONCLUSION

This chapter presents a combination of SNM and Evolutionary Theory to contextualize entrepreneurial actions at niche level and connect it to emerging characteristics at the regime level. As presented in Figure 3-4, literature of Strategic Niche Management and Multi-Level Perspective are used to expand the discussion in Chapter Two by presenting a procedural model and contextualizing sustainability-driven entrepreneurs in their socio-technical systems. Furthermore, the chapter discusses how Evolutionary Theory explains entrepreneurial strategies and roles; how nascent entrepreneurs use their resources, learn, and interact with their business environment to enhance the cognitive and sociopolitical legitimacy of their new practices. While transition cycles (learning, networking, and articulation) from SNM literature represents a procedural pathway for such systemic changes and Multi-Level Perspective contextualize them, Evolutionary Theory explains the interactions among actors and clarifies the roles of sustainability-driven entrepreneurs in such systemic changes. This new combination clarifies how entrepreneurs may play a role in evolution of their socio-technical system by their individual or collective actions, considering exchanges at three levels of regime, niche, and landscape. Therefore, this combination is used to explain the findings in this research. It presents a model for Sustainability Transitions by focusing on entrepreneurial roles and strategies. This combination is further explored in

Figure 3-5, which is an expansion on Figure 3-4. It shows how Evolutionary Theory fits to the model (abstracted from Sustainability Transition literature) in this research to interpret entrepreneurial actions in different rounds of transition cycles. This framework is used throughout this thesis to explain the orientation and findings of this research. In order to access appropriate information, a suitable research method is required; the possibilities and choice are explored in the next chapter.

Figure 3-5 Transition cycles for the formation of a robust niche with Evolutionary Theory



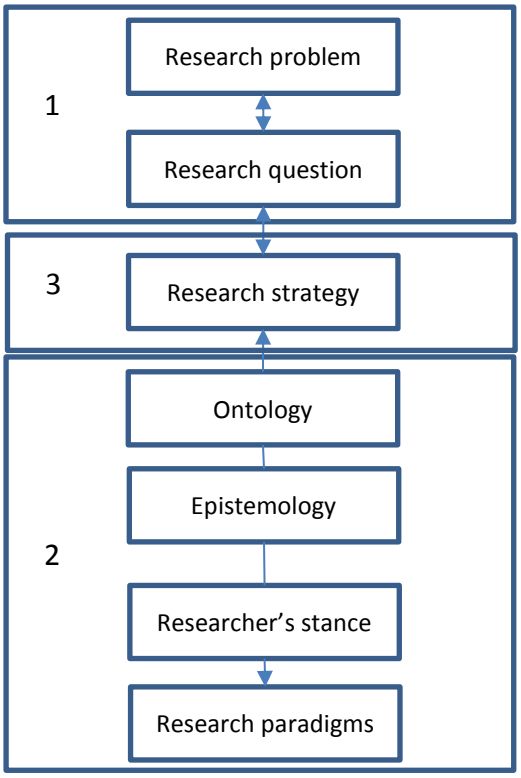
Source: Author's own (Abstracted from literature)

Chapter 4 ***METHODOLOGY AND RESEARCH DESIGN***

The object of all science, whether natural science or psychology, is to co-ordinate our experiences and to bring them into a logical order (Einstein, 1955, p. 1).

This chapter explains the research design of this project, which is a clear outline to show how the research questions are addressed (Yin, 2014, p. 116). The main aim of the chapter is to facilitate access to a better understanding about sustainability-driven entrepreneurs' roles and strategies in socio-technical transitions towards a more sustainable future guided by a robust foundation of the relevant literature. The first part of the chapter is designed based on Figure 4-1, suggested by Blaikie (2007) and used by some other scholars (Gabriel, 2015; Parrish, 2007), as an appropriate outlook for research in social science.

Figure 4-1 Outline of the first part of the chapter



Source: Abstracted from (Blaikie, 2007, p. 33)

Following this outline, firstly the chapter restates the research objectives discussed in detail in Chapter Two, and reiterates the research questions. Then the chapter justifies the philosophical stances in terms of ontological and epistemological assumptions, considering Sustainability Transition and Evolutionary Theory of Organizational Change that were identified as appropriate theoretical frameworks by the researcher in this thesis in the previous chapter. Finally, the third section proposes an appropriate research strategy to address the previously-mentioned requirements.

In the second part of the chapter, a combination of the case study approach and Grounded Theory is proposed as an appropriate research method to translate the above-mentioned characteristics to a practical road map. It shows how different research tools and methods are employed to gain access to the most appropriate participants, collect data, analyze them to address the research questions in this thesis and contribute to the extant literature on sustainability-driven entrepreneurship.

4.1 Research Problem and Research Questions

This section restates the research objective of this study, which is the first and the most fundamental stage for defining a research project, and explains the foci (Corbin & Strauss, 2008) and approximate boundaries of that research (Blaikie, 2007). As discussed comprehensively in Chapters Two and Three, sustainability-driven entrepreneurs are considered as one of the actors who facilitate the process of transition towards a more sustainable future (Gibbs, 2006; Hall et al., 2010). Sustainability-driven entrepreneurs initiate new practices that depart from current routines and norms in their business environment and address some fundamental issues causing social and environmental degradation. They create new forms of organization and interact with other actors to legitimize their actions. Their new legitimate practices may be adopted by others and scaled up to change the dominant trends and what is 'taken for granted' in their socio-technical systems.

The research problem targeted in this thesis, i.e. the lack of understanding of the roles and strategies of sustainability-driven entrepreneurs, is exacerbated by the paucity of research about entrepreneurial roles in systemic changes in their socio-technical systems (Gibbs, 2006; Walton & Kirkwood, 2013). Previous research has overlooked how sustainability-driven entrepreneurs interact with other actors in the socio-technical system, legitimize their new practices, and find broader impacts at the regime level. To address the research objective of creating a more comprehensive and accurate conceptualization of entrepreneurial roles in sustainability transitions, the following research questions are defined:

1. What are the roles and strategies that sustainability-driven entrepreneurs use to facilitate wider systemic changes?

2. What are the key factors that influence sustainability-driven entrepreneurs' actions for systemic changes?
3. What are the main interactions between sustainability-driven entrepreneurs and other actors?

The topic is an important area of research, since the findings can be used by sustainability-driven entrepreneurs for better decision-making, or by policy-makers to propose more effective policies to foster entrepreneurial actions as a solution for sustainability problems. The findings are practically significant as some issues associated with social and environmental degradation call for urgent attentions and better understanding of sustainability transitions, and how different actors play roles in these transitions may help to foster such long-term changes. Furthermore, the findings inform the theory of sustainability-driven entrepreneurship by explaining how the interactions between entrepreneurial action and external environment, and interplay between internal and external legitimacy of new entities may induce wider systemic changes. The findings may be extended in future research that can be used to inform other similar contexts.

To address these objectives, an appropriate plan is designed to facilitate access to the social world of sustainability-driven entrepreneurs, collect appropriate information from their interactions, find the logics behind the observed patterns, and present them in a theoretical language. The remaining of this chapter describes how these objectives are achieved in this study, starting by explaining the research paradigm and research strategy as the foundations for the rest of the decisions.

4.2 Research Paradigm and Philosophical Stance: Relativist Ontology and Interpretivist Paradigm

Previous research in entrepreneurship has been criticized for lack of clear epistemological and ontological stands in its investigations (Hlady-Rispal & Jouison-Laffitte, 2014; Mullen, Budeva, & Doney, 2009; Perren & Ram, 2004). To develop suitable results and avoid the above-mentioned issues, this section justifies an appropriate philosophical stance to connect the researcher's worldview and perspective with the research objectives in this study, which is a better understanding about the roles and strategies that sustainability-driven entrepreneurs have in processes of transitions.

Research paradigm explains the essence of the world and what can be known about it (Blaikie, 2007; Blaxter, Hughes, & Tight, 2010; Morgan & Smircich, 1980). It is defined as "*a basic set of beliefs that guide action"*, which includes notions such as ontology and epistemology (Denzin & Lincoln, 2011, p. 91). On one hand, ontology describes the nature of the social reality and explains what exists, how it looks, what its consisting blocks are, and how they are in contact. On the other hand, epistemology explains how this social world can be known. It defines scopes and the nature of human knowledge (Blaikie, 2007; Lincoln et al., 2011), and describes the relationship between a learner and an object under study (Lincoln et al., 2011).

The two extreme ontological stands are 'relativism' and 'realism'. While the relativist assumes that the external world of observers' thoughts and 'truth' can be varied based on interpretations, the realist considers an external existence for a natural or social phenomena independent of observers experiences (Blaikie, 2007; Järvensivu & Törnroos, 2010). Within relativist ontology, meanings and perceptions are subjective, which could be created and co-created by actors through their interactions (Gephart, 2004; Järvensivu & Törnroos, 2010; Morgan & Smircich, 1980). The epistemological stand of a research project is highly influenced by the realized ontology in that research (Blaikie, 2007) and is dependent on researcher's perspectives and worldviews.

Combinations of different ontological and epistemological stands define a variety of research paradigms, which can be used by researchers, based on their worldviews and perspectives. Different terms are used to describe the combinations of ontological and epistemological assumptions as research paradigms in social science, in which use of complicated language makes them difficult to comprehend (Avenier, 2010; Blaikie, 2007; Blaxter et al., 2010; Morgan & Smircich, 1980). For example Lincoln et al. (2011) introduce five main inquiry paradigms as: positivism, post-positivism, critical theory, constructivism, and participatory; while Blaxter et al. (2010) describe them as: positivist, post-positivist, interpretive, critical, and postmodern; or Burell and Morgan (1979) define four different paradigms as functionalist sociology, interpretive sociology, radical humanism, and radical structuralism. Over time, the borders between different paradigms have blurred, yet differences have strengthened (Gephart, 2004; Lincoln et al., 2011; Morgan & Smircich, 1980).

To avoid the complexities associated with language, a concise version of research paradigms that have been used in management literature is chosen and presented in Table 4-1 (Gephart, 2004). This categorization offers sufficient details to explain different philosophical approaches, while avoiding the complexities associated with other classifications. Hence, it is employed in this research and further discussions are based on the terminologies used in this table to choose the appropriate research paradigm in this thesis based on researcher's world views and the chosen theoretical lens.

Table 4-1 Research paradigms (traditions) in management literature

Tradition	Positivism and post positivism	Interpretive Research	Critical Postmodernism
Assumptions about reality	Realism: objective reality that can be understood by mirror of science definitive/probabilistic	Relativist: Local intersubjective realities composed from subjective and objective meanings: represented with concepts of actors	Historical realism: Material/symbolic reality shaped by values and crystallizes over time
Goal	Discover truth	Describe meanings, understanding	Uncover hidden interests and contradictions: critique, transformation, and emancipation
Tasks	Undertake explanation and control of variables: discern verified hypotheses or nonfalsified hypotheses	Produce descriptions of members' meanings and definitions of situation: understand reality construction	Develop structural or historical insights that reveal contradictions and allow emancipation, spaces for silenced voices
Unit of analysis	Variable	Verbal or nonverbal action	Contradictions, critical incidents, signs and symbols
Methods focus	Uncover facts, compare these to hypotheses or propositions	Recover and understand situated meanings, systemic divergence in meaning	Understand historical evolution of meanings, material practices. Contradictions, inequalities

Source: (Gephart, 2004, p. 456)

This research is conducted to fulfill the requirements for a PhD degree at the University of Otago. It addresses a research gap in the literature, which has practical applications for

policy-makers and sustainability-driven entrepreneurs, to bring about a better understanding of the processes of niche development and entrepreneurial roles in those processes. The topic of the research is led by the researcher's interest in finding solutions for current social and environmental degradation. The researcher has previous experiences in research projects dealing with environmental issues. Based on this experience and background (also the discussion shown in Section 2.1.2.4), the researcher believes that the concept of sustainability is subject to interpretation. Hence, finding a better understanding about the phenomena understudy and making sense of situations requires capturing different worldviews and perspectives of actors involved in those situations.

As discussed in the previous chapter, the researcher has employed an appropriate theoretical lens to reflect these perspectives to inform entrepreneurship literature about roles and strategies that sustainability-driven entrepreneurs may have in socio-technical transitions. As it was comprehensively discussed and justified in Chapter Three, transition towards a more sustainable world happens through a continuous process of change; defined as sustainability journey. Based on this worldview, Sustainability Transition was identified as the appropriate theoretical lens that can address such requirements. Since, research paradigm defines the relationship between theory and method of research (Gephart, 2004), the research paradigm in this thesis should be aligned with this theoretical lens to facilitate access to appropriate data and enable the researcher to offer relevant insights to sustainability-entrepreneurship literature.

As previously discussed, Sustainability Transition frameworks are aligned with quasi evolutionary theories that aim to make the process of variation, selection and retention more sociological (Geels, 2010). In this framework, variation can be guided by expectations of intentional actors (Geels, 2010) and selection takes place in different dimensions that incorporate both scientific and economic pressures along with cultural, social, and political requirements. In the latter group, meanings are subject to interpretations and actors may find different readings about phenomena they experience. In this perspective, actors are knowledgeable agents who interpret rules and employ them in creative ways and retention happens through negotiations that may consequently institutionalize or reject selected trends. This suggests that while there is an objective domain, interpretation of those events could be different among actors, and creating a

better understanding of situations is dependent on how those interpretations are captured and analyzed.

Considering the above-mentioned discussions, the researcher's perspective, and the characteristics of Sustainability Transition as the theoretical lens, this research requires a relativist ontological stance to accept different worldviews involved in socio-technical systems, while it still acknowledges an actual domain where events take place regardless of how people experience them. This philosophical assumption is essential as meanings for a contested concept such as sustainability could be quite diverse among different actors based on their backgrounds and life experiences. Based on Table 4-1, an interpretivist research paradigm can address such complexity. The cross-over between evolutionary theories and interpretivism enables Sustainability Transition to interpret and connect actions at actor level to long-term evolutions at systems level in the actual domain (Geels, 2010); that is the main objective of research in this thesis.

This choice is also consistent across other categorizations that was mentioned at the beginning of this section. For example, Burell and Morgan (1979) introduce two different paradigms for research, where relativism is the assumption as the ontological stance; interpretive sociology and radical humanism. The latter is a suitable paradigm for understanding radical change, which does not match with the journey metaphor of sustainability, which is defined as a continuous process of change through evolution and changes that take place by small scale variations. Hence, among the two paradigms, the interpretive sociology is the more appropriate paradigm for this thesis. Based on this worldview social world emerges as a result of social process that is created by individuals (Burell & Morgan, 1979). This research paradigm is compatible with interpretivist approach chosen in this research. Moreover, it is aligned with symbolic interactionism, which is the basis for grounded theory approach, used in this research as the appropriate method for data analysis, further discussed in Section 4.4.2 (Burell & Morgan, 1979; Charmaz, 2006).

In interpretivist research paradigm, a researcher has different roles compared to the roles she/he could play with positivist and post-positivist research traditions (Ridder, Hoon, & McCandless Baluch, 2014). In the latter groups (positivist and post-positivist), the influence of a researcher on the dynamics of a research process is minimal, while in the former the researcher is a means for data collection and interpretation of data. (Brown,

Stevens, Troiano, & Schneider, 2002; Hlady-Rispal & Jouison-Laffitte, 2014; Ridder et al., 2014). Hence, the researcher's training, position, and values can influence the outcomes of research (Goulding, 1998; Lincoln et al., 2011) and any presumptions from the researcher side, before and during data collection, can change the direction of a study (Yin, 2014). The researcher in this study, as the data collector and analyzer, can affect the outcomes of the thesis. His interests and background may affect his approach towards the subject of the thesis and change the interpretations during data analysis. Nevertheless, the researcher has minimized these aspects by employing a systemic approach for data collection and data analysis, further explained in the following sections.

The other aspect of the relationship between a researcher and the research is the level of involvement. A researcher can be an outsider or insider, expert or learner and the research can be done on the people, for the people, or with the people in the research (Blaikie, 2007; Lincoln et al., 2011). A researcher as an outsider tries to use different methods and techniques to observe the phenomena while he/she is standing back and is not involved in the situation. The other extreme stance for a researcher is to go deep in the situation and use personal experience as the basis for understanding a phenomenon (Blaikie, 2007). In this research, the researcher takes the middle ground and uses different sources of data such as interviews, reports, and organizational information to reflect the participants' world, while not personally getting involved in everyday practices of the participants, which is usually used in ethnographic methods. With an interpretivist research paradigm, it is crucial to let the research participants speak in their own words while reflecting their positions in the situation (Lincoln et al., 2011). As such, the researcher has employed different strategies, such as collecting qualitative data and textual material, to capture and reflect actors' opinions and make unbiased conclusions. This needs a particular research strategy that is discussed in the following section.

4.3 Connecting Purpose to Research Strategy

Research strategy is the logic and reasoning behind the enquiry (Blaikie, 2007) where it should be aligned with the purpose of the investigation for testing and/or building theories. A theory-building approach uses inductive reasoning to make conclusions from observations and creates more general patterns. Theory-testing tactic uses deductive

reasoning to examine hypotheses developed from current literature, to support, modify, or reject a theory (Blaikie, 2007; De Vaus, 2004; Hlady-Rispal & Jouison-Laffitte, 2014; Järvensivu & Törnroos, 2010). In some situations, inductive and deductive tactics can be combined to address more complicated phenomena that require additional iterations, which are called retroductive and abductive strategies (Blaikie, 2007; De Vaus, 2004; Hlady-Rispal & Jouison-Laffitte, 2014; Järvensivu & Törnroos, 2010). However, the use of these two latter terms is restricted to a small number of studies (Hlady-Rispal & Jouison-Laffitte, 2014) and their close and overlapping meanings may cause confusion and make the justification process complicated. Hence, in this research, the terms inductive and deductive, which are the basis for retroductive and abductive, are used to explain various stages of this research.

As the reader may recall from previous chapters, this research investigates the roles and strategies of sustainability-driven entrepreneurs as facilitators of change in transitions of complex socio-technical systems; first, to find a rich picture of these systems, and second to inform theories in sustainability-driven entrepreneurship. The analysis of literature demonstrates that previous research has overlooked this topic and there is not a robust theoretical background that explains the complexities of interactions between sustainability-driven entrepreneurs and their business environment. This lack of theoretical foundation calls for exploratory research to develop a better understanding. The main purpose of this exploratory stage is to discover the underlying logic behind the observed everyday activities in socio-technical systems. This social construct emerges from complex interactions among different actors and it is influenced by their beliefs and motives.

Exploring these relationships and developing a better understanding about them requires an inductive learning strategy, where patterns of behavior and themes of stories emerge from collected data. The results from this inductive stage are examined deductively with relevant literature on sustainability-driven entrepreneurship, Sustainability Transition, and Evolutionary Theory of Organizational Change to inform, revise, or confirm the extant knowledge. In conclusion, this research is heavily based on inductive reasoning, especially at the beginning of the research, while using deductive reasoning to compare the findings of this initial phase with current literature and justifying the theoretical contributions. The results of the first part are presented in Chapters 5 and 6 and the conclusions from the

second part are presented in Chapter Seven and Chapter Eight of the thesis. The following sections explain how the above-mentioned decisions influence the choice of methodology in this research.

4.4 Choice of Method

Choice of methodology is led by philosophical assumptions and research strategies in an investigation. Research methodologies and their specific applications as research methods act as vehicles to guide actions and facilitate access to appropriate information that develop anticipated insights about the topic of study (Hlady-Rispal & Jouison-Laffitte, 2014). They translate the abstract philosophical and logical assumptions behind an investigation to appropriate practical research plans.

This research is mainly based on inductive research strategy and has an interpretivist research paradigm. A hermeneutic or dialectical research approach has the requirement to address these characteristics in order to capture different worldviews and discover the underlying patterns behind everyday practices (Gephart, 2004; Lincoln et al., 2011). Application of hermeneutic or dialectical research approach suggests that the use of qualitative data is essential. Qualitative data enables the researcher to capture how social experiences are created, and how these experiences find meaning and represent the social world of participants.

Qualitative data uses words, talk, and texts to conceptualize the phenomenon under study (Gephart, 2004). Qualitative data was essential in this research in order to understand the worldviews of actors interacting with sustainability-driven entrepreneurs and capture the sociocultural characteristics of their socio-technical systems (Baxter & Jack, 2008; Gephart, 2004). Denzin and Lincoln (2011a, p. 3) define qualitative research as

> *A set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self.*

It is argued that qualitative research in entrepreneurship compared to quantitative research, may result in more philosophical and enriching results. It also helps to develop and refine appropriate research questions in the area of research that are under development (Smith, McElwee, McDonald, & Drakopoulou Dodd, 2013) such as the topic

of research in this thesis. However, despite all these factors, to date, there is limited number robust qualitative research in entrepreneurship journals compared to a quantitative approach (Smith et al., 2013) and further qualitative research with clear philosophical and theoretical background is essential. This research addresses the limitation by employing multiple qualitative case studies, informed by Grounded Theory procedures to find theoretical insights about sustainability-driven entrepreneurs' roles and strategies in socio-technical transitions, as explained in the following sections.

4.4.1 The Case Study Approach

Case studies are one of the appropriate approaches to conduct in-depth investigation of a contemporary social phenomenon (Yin, 2014). A case study can be defined as an "*in-depth inquiry into a specific and complex phenomenon (the 'case'), set within its real-world context*" (Yin, 2013, p. 321). They fit well with the objectives of this research since this approach enables the researcher to investigate the complex interactions between sustainability-driven entrepreneurs and other actors in their business environment to build an in-depth understanding about patterns of change in their socio-technical systems. The case study method is compatible with different ontological and epistemological stands across a continuum from realism to relativism (Järvensivu & Törnroos, 2010; Perren & Ram, 2004; Ridder et al., 2014), therefore it has the requirements for interpretivism research paradigm in this study.

The recognition of the case study approach has risen and the number of publications has increased in different disciplines (Flyvbjerg, 2006; Gephart, 2004; Yin, 2014). It has been used in diverse areas of knowledge from group behavior (Edmondson, Bohmer, & Pisano, 2001), to organizational dynamic (Galunic & Eisenhardt, 2001), and strategy (Mintzberg & Waters, 1982), with different arrangements such as single-case (Kanter & Richardson, 1991) versus multiple (Hanna, 2005), or different levels of analysis (Pettigrew, 1990), to mention some examples. Management and entrepreneurship literature has not been an exception (Byron & Thatcher, 2016; Gibbert, Ruigrok, & Wicki, 2008; Hlady-Rispal & Jouison-Laffitte, 2014; Perren & Ram, 2004; Ridder et al., 2014). The case study research method is especially suitable for investigation of business networks as it is able to capture the dynamics and represent a multidimensional view of such interactions (Järvensivu & Törnroos, 2010), which is an advantage for this research that investigates the dynamics between entrepreneurs and other actors in their business environment.

Case studies are used both for developing theories inductively, and testing hypothesis deductively (Byron & Thatcher, 2016; Dubois & Gadde, 2002; Gibbert et al., 2008). A case study method with qualitative data is especially useful for developing theories at early stages when a phenomenon is being explored (Eisenhardt, 1989a; Gibbert et al., 2008), representing where this research is positioned, as discussed earlier in this chapter and further detailed in Chapter Two. An exploratory case study is a thorough interpretation of a phenomenon with alternative explanations resulting in conclusions (Yin, 1981). Often, theories developed by this methodology are regarded as the most interesting and most cited research (Eisenhardt, 1989b; Eisenhardt & Graebner, 2007). A case study as a theory-building approach has to be deeply embedded in the data (Eisenhardt & Graebner, 2007), which happens through a highly iterative process (Eisenhardt, 1989a).

This research employs a qualitative case study approach (Eisenhardt, 1989a; Gephart, 2004; Perren & Ram, 2004; Silverman, 2013; Yin, 1981, 2014). The qualitative case study approach can capture essential contextual conditions (Flyvbjerg, 2006; Gibbert et al., 2008; Yin, 2014), which is especially useful for entrepreneurial processes to explain rambling and nonlinear events (Hlady-Rispal & Jouison-Laffitte, 2014; Perren & Ram, 2004; Smith et al., 2013). It is suitable to understand how networks of actors work in different settings (Järvensivu & Törnroos, 2010) by preserving the meanings that sustainability-driven entrepreneurs and their networks ascribe to their actions, which otherwise could not be meaningfully understood (Flyvbjerg, 2006). However, analyzing qualitative data in case study research can be difficult because there is no predefined procedure for this purpose (Gephart, 2004; Yin, 2014). It is the least developed part of this method (Eisenhardt, 1989a). One of the ways to address this issue is the application of Grounded Theory procedures within case study research (Eisenhardt, 1989a; Martin & Turner, 1986). This combination enhances the ability to handle larger amounts of qualitative data and offers systemic procedures for data analyzing that clarifies similarities and differences among different contexts and case studies. The following section presents an overview of the Grounded Theory approach, introduces different versions, and chooses an appropriate one for this thesis.

4.4.2 GROUNDED THEORY (GT)

Grounded Theory is a field methodology for constructing theories by investigating the topic of the research in its context (Bryant & Charmaz, 2010; Charmaz, 2006), which

became popular in the 90's. On the other hand, Grounded Theory is compatible with other qualitative research methods and can be combined with them to develop a more systemic approach towards data analysis (Charmaz, 2006; Gephart, 2004; Martin & Turner, 1986) as it is used in this research. It brings a useful analytical framework for collected data (Charmaz, 2006, 2014) and addresses the limitations of qualitative case study research.

Grounded Theory was developed by two sociologists, Barney Glaser and Anselm Strauss, and published in 1967 in the book 'Discovery of Grounded Theory' (Bryant & Charmaz, 2010; Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967). It is defined as "*systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves*" (Charmaz, 2006, p. 2). Nevertheless, some scholars such as Suddaby (2006) warn about overextension in Grounded Theory objectives and argue that results from Grounded Theory can only be an expansion to existing theories rather than yielding a completely new one. It is an approach to discover 'a' theory and not 'the' theory to explain a situation (Goulding, 1998; Heath & Cowley, 2004). This research merely uses the procedures in Grounded Theory to facilitate coding and data analysis and does not intend to propose grounded theoretical propositions, therefore the above-mentioned concerns are not relevant and do not affect the outcomes in this research.

Grounded Theory, after development by Glaser and Strauss, has taken off in different directions. Glaser retained the original ideas of comparison and emergent categories, while Strauss and Corbin introduced new procedures (Charmaz, 2006; Strauss & Corbin, 1998). The main reason for this divergence was the different backgrounds of the two initial authors (LaRossa, 2005). While this divergence approaches between Glaser and Strauss makes this concept difficult to grasp (Heath & Cowley, 2004; LaRossa, 2005), it had significant influence on the growth and popularity of this methodology (Bryant & Charmaz, 2010) to the point that other scholars such as Bryant (2002), Clarke (2003), Schatzman (1991), Chenitz and Swanson (1986), Keddy, Sims, and Stern (1996), have also created other variations (Charmaz, 2006; LaRossa, 2005).

The versions of Grounded Theory can be diverse, from more objective trends to the ones that are more aligned with interpretivist and critical postmodernist paradigms (Bryant & Charmaz, 2010; LaRossa, 2005). Nevertheless, the three main versions of Grounded Theory are still (1) Glaser, (2) Strauss and Corbin, and (3) Charmaz (Bryant & Charmaz,

2010; Charmaz, 2006; Heath & Cowley, 2004; Kenny & Fourie, 2014). There are pros and cons associated with these trends and the selection for novice researchers depends on their cognitive abilities (Heath & Cowley, 2004). Therefore, further discussion is required to choose an appropriate version for this study. The following three sections introduce the main categories in Grounded Theory followed by justification for the appropriate approach for this research.

4.4.2.1 Classic (Glaser or Traditional) Version

The classic version of Grounded Theory is the most similar form to the initial idea of this methodology. It emphasizes the concept of emergence and underlines the importance of inductive reasoning, especially in the early stages of the research (Heath & Cowley, 2004). This approach aims to be as objective as possible to conceptualize theories (Charmaz, 2006; Glaser, 2002; LaRossa, 2005) and it is heavily based on discovery logic (LaRossa, 2005). The procedure starts with data collection and categories emerge from the main patterns in the data. Core categories are developed by linking the more relevant patterns, where they will be used to create substantive and formal theories (Glaser, 2002). This version of Grounded Theory offers a flexible approach towards research (LaRossa, 2005) and it is compatible with inductive-deductive research strategy in this study. However, ambiguity in the language of this methodology, which reflects Glaser's quantitative background (Bryant, 2007; Charmaz, 2006; Goulding, 1998), and lack of a robust explanation about the role of a researcher as an interpreter, make the application of this version of Grounded Theory problematic (Charmaz, 2006).

4.4.2.2 Strauss and Corbin Version

Strauss and Corbin's version of Grounded Theory is still based on a positivistic view, however it considers the relationship among concepts and acknowledges the interpretive position of researchers (Charmaz, 2006). The strong background of Strauss in the Chicago School heritage and his focus on action and pragmatism, is clear in this version of Grounded Theory (Charmaz, 2006; Corbin & Strauss, 2008). This approach became popular because it offers, more or less, a manual or analytic technique, which makes it easier to comprehend, especially for novice researchers (Heath & Cowley, 2004). However, these predefined procedures result in a lack of flexibility (Goulding, 1998; Keddy et al., 1996), and deduction and verification dominants the analysis (Heath & Cowley, 2004; LaRossa, 2005). Methods such as axial coding and questioning are not productive

(Bryant & Charmaz, 2010; Charmaz, 2006) and may take researchers away from the data, or result in interpretations based on the researchers' positionality and background (Heath & Cowley, 2004).

4.4.2.3 CONSTRUCTIVIST (CHARMAZ) VERSION

Charmaz's version of Grounded Theory departs from positivist assumptions of the two other versions and offers a more logical stand towards researchers' positionality in interpretivist and constructivist paradigms. This version of Grounded Theory has a more accurate philosophical stance by distinguishing between objectivist and interpretivism/critical postmodernism views (Bryant, 2007) that eventually may result in more defensible outcomes. It offers a procedure for theorizing and not providing 'the' theory (Goulding, 1998; Kenny & Fourie, 2014). The emergent theory depends on researchers' biases and worldviews as the interpreter of data (Charmaz, 2006; Goulding, 1998). It avoids the prescribed procedures employed by Strauss and Corbin (Kenny & Fourie, 2014). In this version, neither theory nor data emerge or are discovered, however theories develop from interactions among researches and the world, and this involves the present, past, and beliefs of these people (Charmaz, 2006; Goulding, 1998). This version of Grounded Theory has been criticized for lack of distinctive characteristics of abstraction and presenting the findings at a descriptive level (Kenny & Fourie, 2014). However, well conducted research using this version of Grounded Theory has resulted in robust theoretical findings.

As discussed earlier, this research uses an interpretivist research paradigm to investigate sustainability-driven entrepreneurs and capture different worldviews of the actors involved in entrepreneurial actions. The researcher, as the interpreter of the data, organizes the findings in a logical way, presents them in a theoretical language, and informs the theory by comparing the emerging themes with the literature of sustainability-driven entrepreneurship and Sustainability Transition. As explained above Charmaz's version of Grounded Theory acknowledges the role of a researcher as an interpreter. It considers the social world as a process of creation and recreation of meaning among different actors within their social constructs. It is necessary in this research so as to understand how sustainability-driven entrepreneurs interact with other actors to construct and reconstruct their social worlds through these interactions, and moving towards their goals. Hence, Charmaz's version of Grounded Theory is more

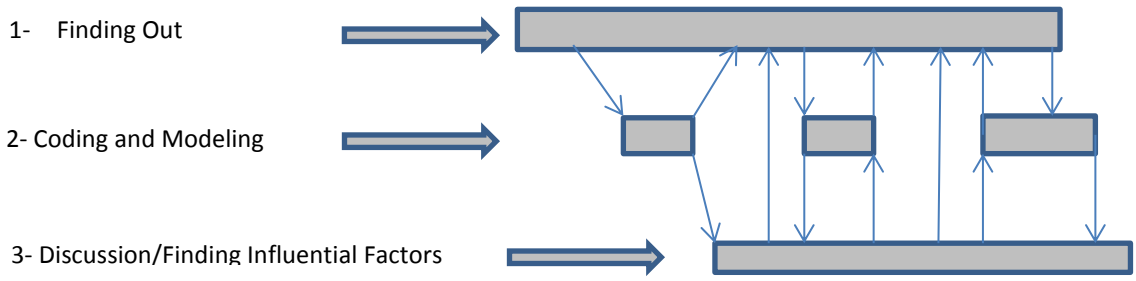
aligned with the requirements in this research. Moreover, criticism of the positionality of the researcher in the Glaser's version of Grounded Theory, and the prescribed procedures in Strauss and Corbin's version, are other reasons to choose the procedures in Charmaz's version of Grounded Theory in this study.

In summary, this research employs embedded qualitative case studies informed by Charmaz's version of Grounded Theory for data collection and analysis to facilitate access to appropriate knowledge and address the research questions. Different research tools are employed to execute this research method in practice. The details are discussed in the latter half of this chapter by describing the procedures for data collection, data analyzing, and presentation of the results (which are termed case study protocols).

4.5 Research Design: Embedded Case Studies Combined with Grounded Theory

This section presents an overview of the research procedures in this study. It explains how a qualitative case study informed by Grounded Theory procedures is used in different stages of the research in order to address the requirements of that specific phase. The procedures were implemented in an iterative cyclic manner (Sinkovics & Alfoldi, 2012) as it is shown in Figure 4-2. This iterative process, which is compatible with qualitative research logic (Sinkovics & Alfoldi, 2012; Suddaby, 2006), resulted in a better understanding of the situations (Checkland, 2010) and enabled the researcher to revise and refine the objectives in the research during the course of this study.

Figure 4-2 Pattern of activities in this research

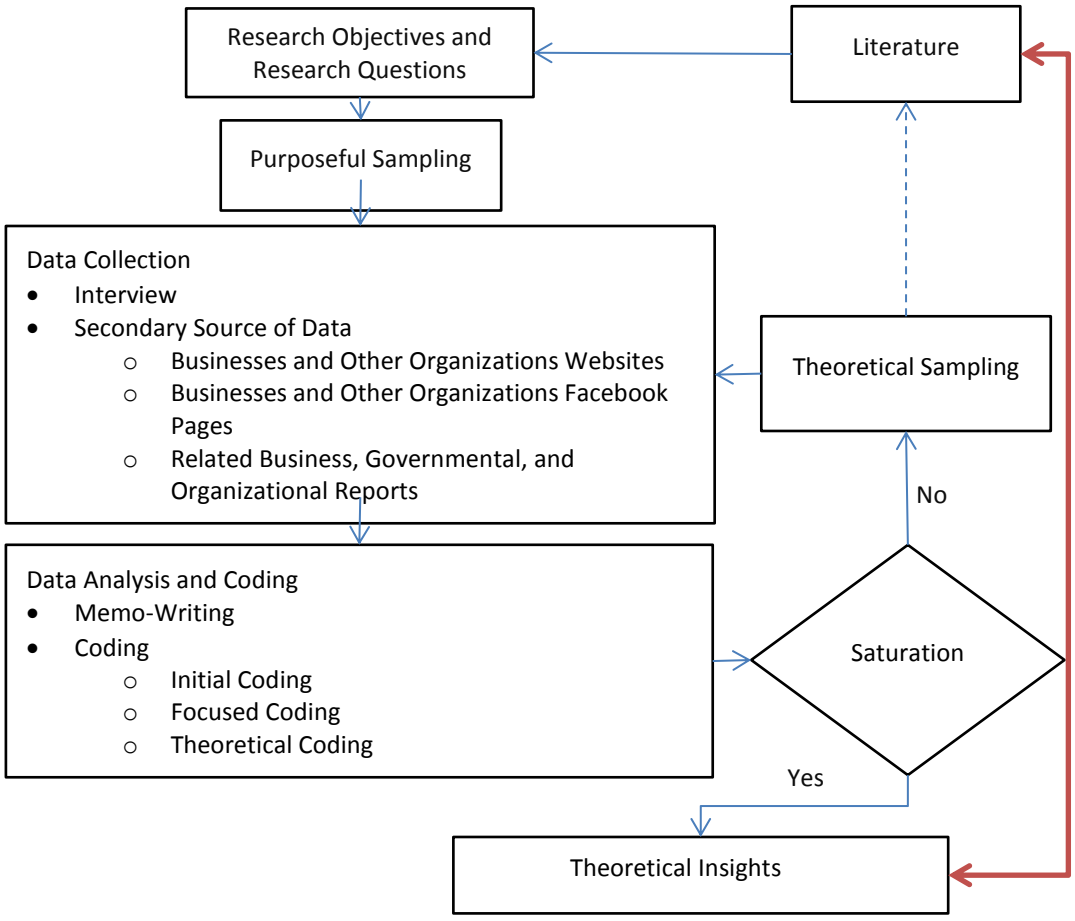


Source: adapted from (Checkland, 2010, p. 208)

The process (as it is shown in Figure 4-3) starts by reviewing the sustainability-driven entrepreneurship literature. The outcome of this review identifies the main area of concern and defines the research questions of this project, as discussed in detail in Chapter Two and reiterated in Section 4.1. The process of data collection starts by

purposeful sampling among the sustainability-driven entrepreneurs in two different contexts of the retail sector and the wine industry. The criteria for the selection of the cases and units of analysis stem from the literature review and the main theoretical background underlying the research objective at the first stage, which are further discussed in this chapter and at the beginning of the results chapters. Interviews are the primary source of data collection, while other sources of data such as reports, and websites of companies and organizations are used to find a deeper understanding of the social worlds of the participants. The process of data collection commences by interviewing selected entrepreneurs and continues among other actors in their business environment who were involved in entrepreneurial actions, informed by the findings from the previous interviews. This iterative process of interviewing, coding, and interviewing is led by the guidelines from theoretical sampling and category saturation in Grounded Theory. The saturation of categories also defines the boundaries of data collection and limits the number of interviews.

Figure 4-3 The overall research procedures in this study



Source: Author's own

The procedures in Grounded Theory; such as initial and theoretical coding, and constant comparison; are used to make sense of the data and inform the theories in sustainability-driven entrepreneurship and Sustainability Transition. Both inductive and deductive reasoning are used in this process, where emerging themes from the data lead to a more comprehensive literature review, which helps to choose an appropriate theoretical framework to explain the findings. This results in a combination of Sustainability Transition (Multi-Level Perspective, and Strategic Niche Management), and Evolutionary Theory as the theoretical framework in this research, discussed in Chapter Three. These procedures are shown in Figure 4-3. The literature in selected theories is used as a source of data for comparison with the findings in this research and identify the potential contributions of this thesis. The following sections describe this procedure in detail.

4.5.1 Use of Literature and Theoretical Lens

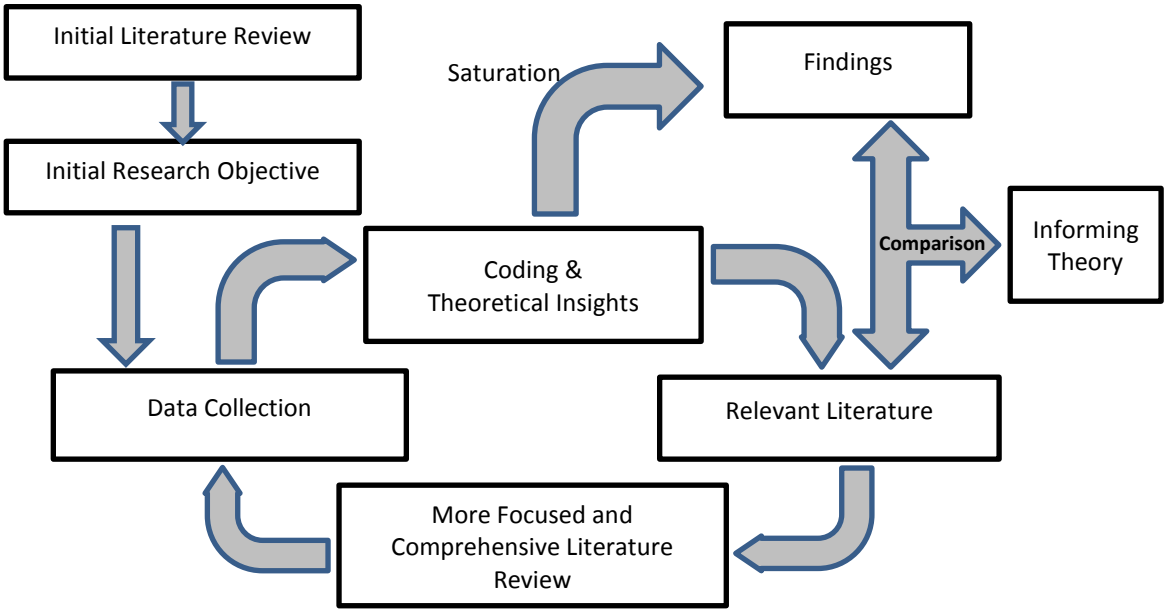
Robust theoretical background and positioning in the relevant literature at the beginning of a research project leads to a more accurate process of data collection and data analysis (Eisenhardt, 1989a; Eisenhardt & Graebner, 2007; Smith et al., 2013; Yin, 2014). This notion becomes more important for exploratory research, such as this study, since it justifies that there is not adequate research on the topic and insures that the research objective addresses an important research gap in the relevant literature (Eisenhardt & Graebner, 2007).

It is argued that a researcher cannot and should not go to the field empty-minded (Charmaz, 2014; LaRossa, 2005). In a review paper, Suddaby (2006) argues that the usage of Grounded Theory cannot be an excuse to ignore previous literature, and lack of awareness about extant knowledge cannot justify conducting research within an area with history and credibility (Smith et al., 2013; Suddaby, 2006). Past experiences and review of literature will help the researcher to have theoretical sensitivity and add new insights to previous theories (Heath & Cowley, 2004). Nevertheless, findings from initial data collection and coding and interplay between inductive and deductive reasoning would lead the researcher to more focused and related literature (Charmaz, 2006; Eisenhardt, 1989a).

Following the above-mentioned logic, and considering the application of the case study method and procedures in Charmaz's version of Grounded Theory, this research started by conducting a literature review on entrepreneurship and more precisely on social,

environmental, and sustainability-driven entrepreneurship. This initial literature review resulted in finding the research objectives, and led to the research questions explained in Chapter Two. The findings from the initial data collection and emergent patterns led the researcher to more focused and related literature. Hence, during the course of the project, previous analyses were refined and more relevant research was added. This iterative process between inductive and deductive reasoning is shown in Figure 4-4.

Figure 4-4 The process of literature review in this thesis



Source: Author's own

The final version of the literature review, as presented in Chapter Two, has analyzed the related literature through a thorough comparison of opinions and justified where and how the findings in this research contribute to the related fields. Moreover, the emergent themes during the project lead to more suitable theoretical lenses, which is Sustainability Transition and Evolutionary Theory, necessary for explaining the findings. The result of this emerging literature as the theoretical lens in this research is presented in Chapter Three. After finding the research objectives and defining the research questions, a systemic approach was necessary to gain access to appropriate data that is discussed in the following sections.

4.5.2 Data Collection

Data collection is a crucial stage in a case study research up to the point that many researchers correspond case studies with data collection methods (Yin, 2014). Data should

be detailed and focused, in order to capture the participants' feelings and worldviews, while explaining the contextual and structural characteristics of a research world (Charmaz, 2006; Silverman, 2013). Rich data can be gathered from different sources such as (1) documents, (2) archival records, (3) interviews, (4) direct observation, (5) participant observation, and (6) physical artifacts (Blaxter et al., 2010; Charmaz, 2006; Eisenhardt & Graebner, 2007; Yin, 2014). However, selecting appropriate cases, identifying suitable units of analysis, and defining boundaries for case studies are critical stages that need to be addressed before sources of data are selected. These notions are discussed in the following sections.

4.5.2.1 SELECTION OF THE CASES

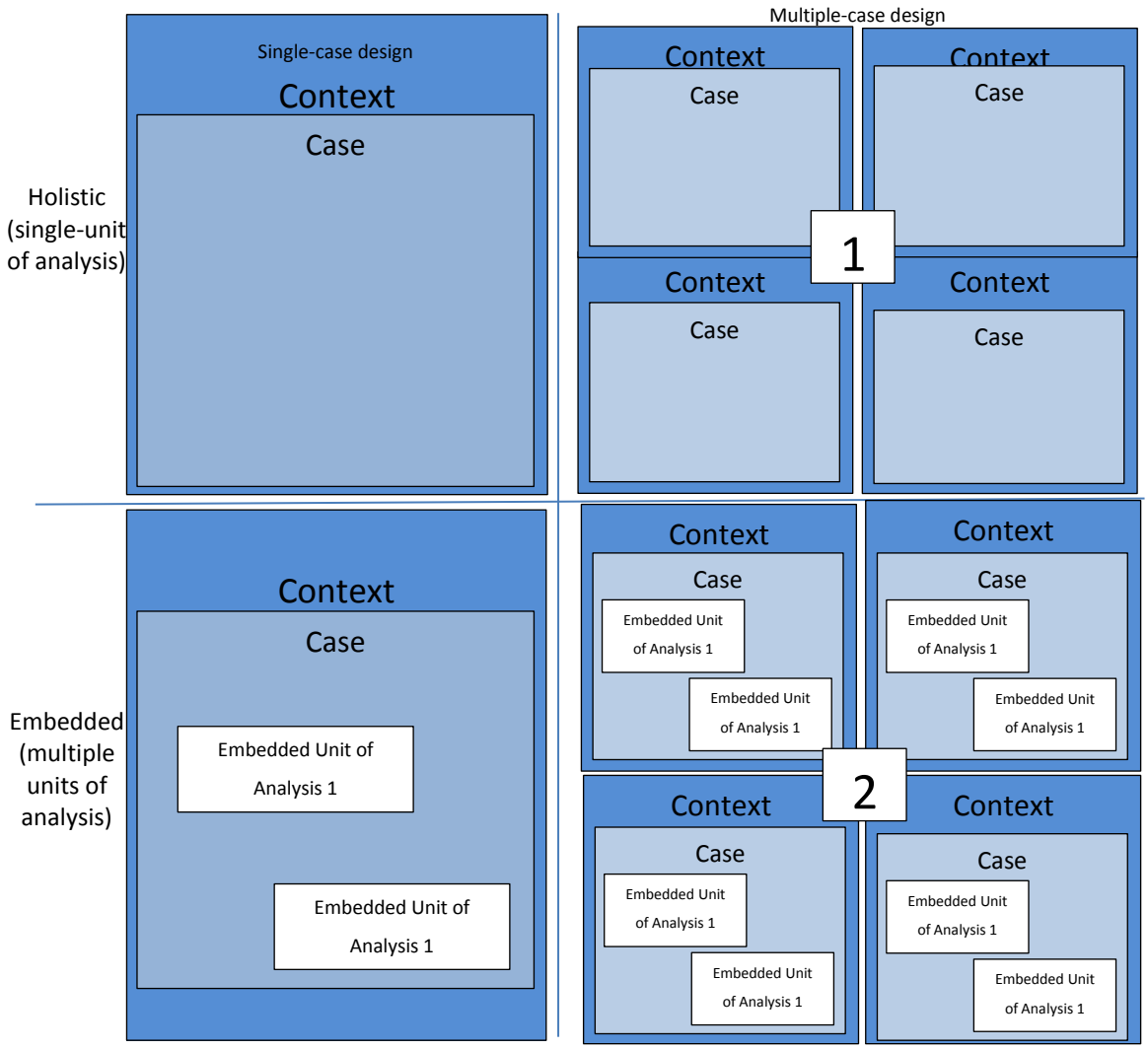
Defining a case study comprises of two steps: (1) finding an appropriate and relevant subject for study, and (2) bounding[5] it (Perren & Ram, 2004; Yin, 2014), which means identifying clear boundaries between the subject and what is considered as the context. It is influenced by two dimensions of multiple versus single and embedded versus holistic design (Knight, 1921) as shown in Figure 4-5. An embedded case study can be used in situations where the research investigates more than one level of analysis and attention is given to subunit(s) in the case, while a holistic approach refers to situations where a case study design examines the nature of an organization or a program in its context (Yin, 2014). This research connects the actions at the actors' collective and/or individual level, to emergent characteristics at system's levels. Therefore, an embedded case study design (area 1 or 2 in Figure 4-5) is an appropriate method for investigating sustainability-driven entrepreneurs and contextualizing them in their socio-technical systems (Pel, 2014).

On the other hand, the decision as to the number of cases, multiple versus single, is dependent on different criteria such as intentions behind a research and available resources. This research is designed to have theoretical contributions by informing the extant knowledge in sustainability-driven entrepreneurship, using a qualitative case study method. It must be kept in mind that theories derived through qualitative case studies are sometimes criticized for problems of generalizability, and/or lack of rigor (Flyvbjerg, 2006; Järvensivu & Törnroos, 2010; Platt, 1992; Ruddin, 2006; Yin, 2013, 2014), which can be

[5] "*The boundaries indicate what will and will not be studied in the scope of the research project*" (Baxter & Jack, 2008, p. 547)

addressed by a right balance between the number of cases and the depth of investigations.

Figure 4-5 Basic types of design for case studies



Source: (Yin, 2003, p. 40)

In the qualitative case study approach, generalization is not similar to a statistical approach (Silverman, 2013) and findings are not intended to be applicable for a wider population or universe (Järvensivu & Törnroos, 2010; Yin, 2014). In qualitative case studies, generalization is analytical, which may result in corroborating, modifying, rejecting, or advancing available theories. The final goal for an exploratory case study with an interpretivist research paradigm, such as this thesis, is about finding an in-depth understanding of the phenomena under study (Järvensivu & Törnroos, 2010). Although, the results can be a base for further investigations to find more generalizable hypotheses for a larger population (Silverman, 2013). This reasoning dismisses the criticism about

generalizability, yet highlights the importance of rigor in this research that needs further attention.

Robustness of theories resulting from a qualitative case study research is dependent on the depth of data and thoroughness of analysis (O'Reilly & Parker, 2012; Silverman, 2013). While multiple case studies may add to the depth of investigation; where replication and comparison may clarify different aspects of the phenomenon under study (Eisenhardt, 1991; Eisenhardt & Graebner, 2007; Hlady-Rispal & Jouison-Laffitte, 2014; Ridder et al., 2014); bigger numbers raise the concern regarding an unmanageable level of effort for analyzing long and unreadable documents, and may result in a lack of comparative advantage (Flyvbjerg, 2006; Järvensivu & Törnroos, 2010; Miles, 1979; Silverman, 2013; Yin, 2014). Larger numbers of case studies may lose construct and internal validity in order to gain external validity (Gibbert et al., 2008; Morse, 2010), and provide descriptive conclusions rather than abstract theoretical insights (Dubois & Gadde, 2002; Järvensivu & Törnroos, 2010). The same issue is relevant for some Grounded Theory studies (Becker, 1993; LaRossa, 2005; Suddaby, 2006). They deliver descriptive explanations of situations and do not offer insightful theoretical outcomes about the phenomena under study (Becker, 1993; LaRossa, 2005; Suddaby, 2006).

Bearing in mind the above-mentioned argument and considering the available resources during a PhD course, two case studies in different contexts are employed in this thesis to keep a balance between external and internal validity. The two case studies enable the researcher to find similarities and differences and propose robust theoretical outcomes to inform the literature in sustainability-driven entrepreneurship. Replication of findings in different cases adds to their values, and differences may clarify details and add to the dimensions of emerging themes about entrepreneurial actions. However, to avoid losing internal validity, considering time and other available resources for the researcher in this study, beside restricting the numbers of case studies to two, the contexts are narrowed down to specific domains to minimize variation factors. These restrictions reduce the generalizability of the findings, but limit the amount of data that enable the researcher to find deeper understanding about collected information and consequently develop better internal validity.

The choice of cases is important as social situations are bounded to specific local and historical characteristics. It should be clear how findings from chosen case studies are

applicable in other contexts and situations and how their comparative analysis adds to the thoroughness of the findings and theoretical foundation of the relevant fields (Järvensivu & Törnroos, 2010). This research looks at two different contexts, the retail sector and the wine industry in New Zealand, and investigates multiple units of analysis in those socio-technical systems, as shown in Table 4-2. The reasons behind this selection are further discussed in this section.

Table 4-2 Descriptions of the two embedded case studies in this research

	Context (socio-technical systems)	Case (Niches)
Retail	New Zealand retail sector	Organic and Fairtrade retail section
Wine	New Zealand wine industry	Organic, biodynamic, and carboNZero section

The first case study investigates the ethical, Fairtrade, and organic niches in the retail sector, focusing on entrepreneurial retail shops and their interactions with their wider business environment. The retail sector is selected as it is relevant to most other socio-technical systems, in which strong norms of consumerism and institutions based on shareholders' profit maximization have resulted in different social and environmental problems. Issues such as poverty among producers, large amounts of packaging, and energy-intensive transportation have been criticized by researchers. Moreover, big retail chains and megastores in the retail sector have huge influences on other parts of the supply chain via their choices. Their social and environmental strategies influence other sectors and alteration in their policies towards more socially- and environmentally-friendly practices may initiate change in other fields and address some of the sustainability problems that need urgent attention. Hence, creating a better understanding of sustainability-driven entrepreneurs and process of change may help solve social and environmental problems within this sector and across other related contexts. These reasons are further discussed in Chapter Five when the findings of this case study are presented.

The second case study is looking at the organic, biodynamic, and carboNZero niches in the wine industry of New Zealand, focusing on entrepreneurial companies in the two regions of Nelson and Marlborough. The wine industry, as part of the agriculture sector and process industry, is selected because usage of dangerous chemicals, inappropriate usage of water, and energy intensive production has resulted in different social and

environmental degradation. Moreover, different social and environmental issues are relevant to the wine industry itself, which is further explored in Chapter Six when the results of this case study are presented. Furthermore, the regional structure of the wine industry is similar to different agricultural clusters. Therefore, findings from this case study could help to explain transitions in similar agriculture industries with regional structures.

On the other hand, differences between the entrepreneurial orientations in the retail sector and the wine industry enable the researcher to conduct a constructive comparison between these two cases and gain a deeper insight about different entrepreneurial actions. The entrepreneurs in the retail sector tend to prioritize social objectives, while the entrepreneurs in the wine sector are more inclined towards environmental goals. Previous literature is criticized for lack of attention to social aspects of innovation (Adams et al., 2016; Klewitz & Hansen, 2014) hence investigating sustainability-driven entrepreneurs with more socially-driven innovations in the retail sector, and its comparison with more environmentally-driven innovation in the wine industry, offers better insight about their differences and addresses this gap in the literature.

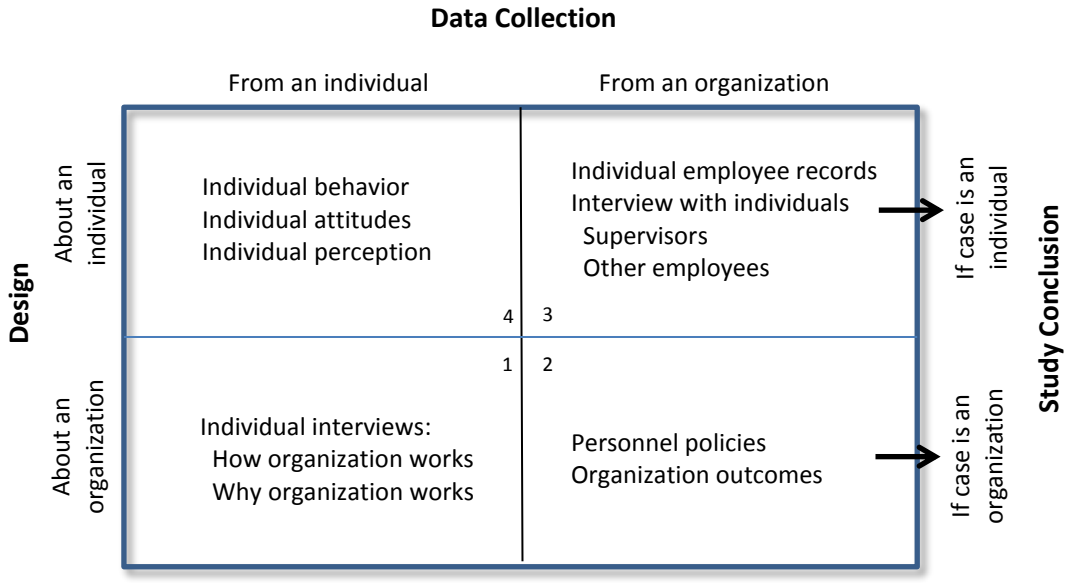
For this reason, the case study of the retail sector is presented first, to address some aspects of this research objective. The case study of the wine industry is presented next to find the patterns of sustainability-driven entrepreneurs with more environmental objectives as their priority, and bring about the requirements for cross-case comparison. The results of the comparison between the two cases is presented in the discussion chapter (Chapter 7), which clarifies the similarities and differences and offers better insight about patterns of change in socio-technical systems associated with entrepreneurial orientations. Selecting appropriate units of analysis is an important part of the embedded case study research to gather in-depth and relevant information. The following section defines how units of analysis and boundaries for different cases are identified through purposeful and theoretical sampling.

4.5.2.2 Selecting Units of Analysis

This research investigates changes at different levels in socio-technical systems, focusing on entrepreneurial roles and strategies. It explains how sustainability-driven entrepreneurs play roles and have strategies to form strong niches that may eventually scale up and change the characteristics of the regime at the system level. The thesis is

about socio-technical transitions, which exemplifies large-scale organizational changes. Hence, as it is shown in Figure 4-6, items categorized in areas 1 and 2 can be considered as units of analysis.

Figure 4-6 Selecting the units of analysis based on the level of analysis



Source: (Yin, 2014)

These items include individual interviews, such as entrepreneurs, and organizational outcomes, including reports and performance criteria (Yin, 2014). However, since samplings in a qualitative research do not follow a prescribed procedure (Coyne, 1997; Morse, 2010; O'Reilly & Parker, 2012; Silverman, 2013), selecting the most relevant organizations and individuals are crucial to collect the richest possible data. Samplings in qualitative research have different logics compared to statistical experiments where units of analysis have to represent diversities in a population (Coyne, 1997; Eisenhardt & Graebner, 2007; Silverman, 2013). This research utilizes instructions of purposeful and theoretical sampling to achieve this aim (Coyne, 1997; Morse, 2010; Silverman, 2013).

Purposeful sampling means acquiring knowledge from sources which are believed to be most relevant and have the highest possibility of answering the research questions (Coyne, 1997; Morse, 2010; Silverman, 2013). If a research project aims to study specific individuals or populations, clear definitions of them are necessary for initial samplings (Charmaz, 2006). Hence, specific characteristics of sustainability-driven entrepreneurs, as

emerged from the literature review in Chapter Two, are used to inform the purposeful sampling among companies. These characteristics are:

1- founded by entrepreneurs;
2- driven by sustainability (social and environmental) values from their commencement;
3- financially viable (intended to earn a profit or at least cover all cost);
4- still managed/owned by their founders; and
5- considered pioneers[6] in their sector or industry with clear departure from current norms and practices in their socio-technical systems, which create financial and non-financial gain for individuals and communities (by definitions of the time)

The selection of interviewees started based on purposeful sampling, using the above-mentioned criteria. Internet searches, results from sustainability competitions, and media news about successful socially- and environmentally-friendly businesses were the initial sources to find appropriate units of investigation. Details of the participants are discussed at the beginning of each results chapters. The selected entrepreneurs were contacted by email, which was followed up by telephone conversation attempts if there was no response to the emails. The process of selection continued by theoretical sampling to clarify the findings from this initial stage (Coyne, 1997; Gephart, 2004).

Theoretical sampling means "*cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs*" (Eisenhardt & Graebner, 2007, p. 27). It is an appropriate way for theory-making (Eisenhardt, 1989a; Silverman, 2013) in order to collect the most relevant data related to emerging categories and themes from previous stages in data collection (Morse, 2010; Silverman, 2013). Theoretical sampling is based on the constant comparison of emerging themes and newly-collected data during the process of inquiry (Becker, 1993; Charmaz, 2006; Coyne, 1997; Holton, Bryant, & Charmaz, 2007). It is compatible with inductive and deductive approaches and Grounded Theory coding procedures that is employed in this research (Becker, 1993).

[6] Pioneers are defined as firms that employ competence destroying strategies (defined in Section 3-2-2) in an industry (Aldrich & Ruef, 2006)

Theoretical sampling empowered the researcher to review past procedures and refine future plans (Charmaz, 2006; Coyne, 1997). After each interview, collected data was analyzed and emerging patterns were built. Based on these initial findings more relevant sources of data were selected to illustrate different dimensions of emerging themes. This happened by selecting relevant organizations and actors who were involved in entrepreneurial actions (Morse, 2010). Questions, such as "Who were the other actors in entrepreneurial actions?", "Who was influenced by those actions?", and "Who may have different perspectives?" were used during this process to select appropriate participants. To facilitate this process, during interviews, interviewees were asked to introduce other actors that were relevant to the conversation themes, which is also reflected in the ethics application and consent form of this study. In the consent form, interviewees were asked to authorize the researcher to contact other actors who were relevant to themes of conversation.

The researcher, based on the previous findings, emerging themes in the collected data, and suggestions of the interviewees, contacted the relevant actors, and organizations, or searched for suitable sources of information such as reports and websites. Enquiry from these sources clarified the connections between emerging themes and identified diverse dimensions of entrepreneurial actions. It also enabled the researcher to capture different interpretations of actors involved in entrepreneurial actions (Silverman, 2013), which was necessary to understand how the dynamics and social construct between these actors work. Different tools were employed in this research for data collection, which is further discussed in the following sections.

4.5.2.3 Interviews as the Main Source of Data

Interviews are an efficient way to collect rich empirical data (Deakin & Wakefield, 2013; Eisenhardt & Graebner, 2007; Gephart, 2004; Patton, 1990) and are used as the main method for data collection in this research. They are one of the most common and useful techniques for data collection in the case study research (King & Horrocks, 2010; Yin, 2014). An interview is a directed discussion to find an in-depth exploration within the research area (Charmaz, 2006; Gephart, 2004; Yin, 2014), which could be categorized to ethnographic, long, focus groups, and semi structured (Gephart, 2004). In this research, semi-structured interviews were used to let the interviewees lead the conversation. The

line of questioning was fluid (Horton, Macve, & Struyven, 2004; Yin, 2014) and participants could highlight their particular interest and area of expertise (Horton et al., 2004).

Influenced by the interpretivist research paradigm, interviews were conducted with a search and discovery mission to maximize valid and reliable information. This could be different from using constructivist research paradigm which states that knowledge is constructed jointly between interviewer and informant (Järvensivu & Törnroos, 2010). In this research, the researcher was more a listener than a participator in a conversation. In most cases interviews were conducted face-to-face and enabled the researcher to build more productive connections with interviewees and find a better sense of their working environment and their interactions.

After each interview, important information, observed in situations, were captured as memos and notes by the researcher. They described details such as feelings and expressions during the interviews that were not possible to record by the audio files (Goulding, 2002; Martin & Turner, 1986). These memos helped to capture assumptions and propositions during the coding process. In some situations, where 'gold standard' of face-to-face meetings were not possible, Skype[7] or telephone interviews were employed as an appropriate substitute for face-to-face meetings (Deakin & Wakefield, 2013; Hay-Gibson, 2009). In total, 33 interviews were conducted; details are shown in Table 4-3. Further specifics are explored at the beginning of the results chapters.

Choosing appropriate questions and the ability to be a good listener are crucial factors, which influence the outcomes in an interview process (King & Horrocks, 2010; Silverman, 2013; Yin, 2014). In this research, the initial interview questions were designed carefully, through desk review, between the main researcher and the supervisory team. The literature review and the research objective of this study were used as roadmaps for this purpose (Horton et al., 2004). The questions were designed in a language understandable by interviewees (Charmaz, 2006). Hence, appropriate equivalent terms were substituted for some of the technical terms, such as socio-technical systems and regimes, in order to avoid confusion (Yin, 2014).

[7] '*Skype software is available to download for free and provides a variety of communication options, including audio and video calling with other Skype users, telephoning landlines or mobile phones as well as providing messaging and file transfer capabilities*' (Deakin & Wakefield, 2013, p. 4).

Table 4-3 Details of interviews for the two case studies

Cases		Number of interviews[8]	Details	
1	Retail sector	16	Face to face interviews	11
			Skype and telephone interviews	5
			Hours	15 hours (895 minutes)
			Average	53 minutes
			Maximum	180 minutes
			Minimum	20 minutes
2	Wine industry	18	Face to face interviews	14
			Skype and telephone interviews	4
			Hours	17 hours (1014 minutes)
			Average	56 minutes
			Maximum	90 minutes
			Minimum	35 minutes

Nevertheless, after the initial interviews, arrangements and some of the questions were revised to better fit with the purpose of the study and more clearly articulate this purpose to participants. This process resulted in two versions of semi-structured interview questions that are shown in Appendices One and Two. One version was used for interviews with sustainability-driven entrepreneurs, as the main focus of this research, and the second one was used during interviews with other relevant actors. All the interviewees were informed about the main questions before their interview sessions (Horton et al., 2004), however, more detailed questions were asked during the course of conversation. In some instances, the researcher, based on the line of conversation in the interviews, changed the wording and sequence of the questions to keep the flow of conversations.

In order to find more detailed information from the participants, graphical representations of previous findings were used during the later interviews to enrich the conversations (Bell & Morse, 2013; Berg & Pooley, 2013; Crilly, Blackwell, & Clarkson,

[8] One interviewee was shared between two case studies. This interviewee was relevant to both case studies as the person was involved with organic agriculture in New Zealand in several different roles.

2006). This approach, which is also known as 'Graphic Ideation' (Crilly et al., 2006), was employed in face-to-face interviews (Deakin & Wakefield, 2013) to discuss and check emerging themes from previous findings (Berg & Pooley, 2013; Checkland, 2000; Crilly et al., 2006; Hay-Gibson, 2009) and collect more focused data to gain access to remaining dimensions of emerging themes. The final pictures for the case studies in this thesis are shown in

Figure 5-3 and Figure 6-2. Moreover, some of the pictures used during the interviews are shown in Appendix 5.

These pictures were used during the interviews because graphical representations are appropriate to show interpersonal and inter-organizational activities and their complexities. The main aim of using graphical representations is '*to capture, informally, the main entities, structures and view points in the situation, the process going on, the current recognized issues and any potential ones*' (Checkland, 2010, p. 210). In this research, graphical representations offered a more holistic view of situations during the interviews while enabling the research to focus on specific activities in detail with interviewees, which otherwise would be difficult to achieve. These graphical presentations provided the researcher a useful tool to check the findings from previous interviews, capture different worldviews, ask for clarification, and/or gain more details. It was used in this research as a descriptive tool for showing complex situations and unfolding interactions among relevant actors in socio-technical systems to collect detailed information, while not losing the big picture (Checkland, 2000).

While application of pictures for communication has been criticized as they are subject to multiple interpretations (Berg & Pooley, 2013; Crilly et al., 2006), in this research they were used to conduct more comprehensive conversations and produce different interpretations fostered through deeper communication, resulting in more detailed information. The pictures enabled interviewees to compare the representations in the diagrams with their own experiences and ideas and provide feedback to the researcher. Yet, because in inductive research the purpose of the investigation is to gain access to participants' knowledge and researchers should not lead the interviewees in a particular direction (Charmaz, 2006; King & Horrocks, 2010; Silverman, 2013; Yin, 2014), the discussion incorporating pictures took place after asking the main questions in a standard

interview. The pictures were used to elicit more information after those discussions. These pictures encapsulate associations, meanings, and non-verbal communications from multiple perspectives within a messy situation and recreate what has happened in the past (Berg & Pooley, 2013).

Managing an interview session is important for collecting the most relevant information and keeping the conversation on track (King & Horrocks, 2010; Morse, 2010). Power imbalance, between interviewee and interviewer may cause problems in managing time, length, and content of the interview (Charmaz, 2006). The interviews in this research were mostly conducted in places chosen by the interviewees except in a few cases, where face-to-face meetings were not possible. As mentioned earlier, in those situations, Skype or telephone interviews were conducted with the interviewees' agreement. Both sides in the interviews, i.e. the researcher and the interviewees, were not in the position to influence each other's work; hence, there was no serious concern about power imbalance. Moreover, participants were free to leave questions without answers whenever they were not comfortable with the questions; however, at no instance were the interviewees reluctant to answer questions.

English was the second language for the researcher and almost all the interviewees, except two, were native English language speakers, hence during the interviews, in some occasions, secondary questions were asked for more clarification. All the interviews were recorded by a digital voice recorder and then the files transferred to a computer for more security (King & Horrocks, 2010; Silverman, 2013). All the files were transcribed by the researcher (Silverman, 2013) into Word documents and imported into NVivo software for coding purposes, which is further discussed in Section 4.5.3. Since interview was the main method of data collection in this thesis ethics considerations were one of the main concerns, which is further discussed in the following section.

4.5.2.4 Ethics Considerations

Conducting these two case studies involved interaction with human subjects, hence taking extra care by gaining informed consent forms from all participants was essential (Gray, 2009; Silverman, 2013). The participants were informed about the nature of the research and their rights, and the researcher took the necessary actions to protect them from any kind of loss such as deception in the study (Yin, 2014). The ethics in a research project

includes "*the interaction and relationship between the researcher and the subject as well as the effect inquiry research has on population*" (Lincoln et al., 2011, p. 109). The researcher had to safeguard the privacy and confidentiality of people who participated in the research study, in order to protect them from any undesirable position that may result from participating in this research. Special care is required to be paid to vulnerable groups, such as religious or ethnicity minorities, whenever it is applicable (Silverman, 2013; Yin, 2014), which was not an area of concern in this research.

To prepare a formal consent form for this thesis, an ethics application was sent to the 'Human Ethics Committee' at the University of Otago to justify the research and take permission for interactions with the participants. The consent form is shown in Appendix Three. After the confirmation of the ethics application, the information sheet of the application (Appendix Four) was used to inform the participants about the research contents, procedures, and expected outcomes. Before starting the interviews, all aspects of the research were discussed with possible interviewees and if they were willing to participate, they were asked to sign the consent form as a formal agreement for their participation in the project. In the case of telephone and Skype interviews, the consent forms were sent in advance by email to potential participants. If they were willing to take part in this research, they replied confirming the terms in the consent form and acknowledging their agreement for participation. While in the consent forms all the participants agreed to be mentioned by their names, the results are presented anonymously. However, some of the participants could be identified by people who are familiar with the contexts in this study because of their unique characteristics.

The collected interview data, as hard documents, were maintained in a secure location in the Department of Management. Likewise, the soft documents (such as audio files and transcripts) were kept on a password protected computer, which was only accessible by the researcher. These precautions were used to keep the files out of the reach of unauthorized people and minimize the risk of inappropriate use or any chance of deception (Gray, 2009; Silverman, 2013). In addition to interviews, other sources of data are employed in this research, as discussed in the following section.

4.5.2.5 OTHER SOURCES OF DATA

Seldom are interviews the only type of data in utilized in case research or Grounded Theory (Eisenhardt, 1989a; Goulding, 1998; Silverman, 2013; Suddaby, 2006), and findings are deemed to be more convincing if they are derived from multiple different sources of data (Eisenhardt, 1989a; Gray, 2009; Yin, 2014). Moreover, major issues with embedded case studies occur when a researcher only focuses on the subunits and does not step back to examine the bigger picture (Yin, 2014). As such, multiple sources of data help to clarify the connections among different pieces of information to bring about a more holistic picture (Järvensivu & Törnroos, 2010).

While interviews with sustainability-driven entrepreneurs and other actors in their business environment were the main source of data, other published information such as related academic literature; websites of the organizations, NGOs, or related institutes, reports, and media reports were used as secondary sources of data. This information was used to find a deeper insight about situations under study, connect information from other sources, triangulate the previous findings, and gain detailed information about various dimensions of emerging themes. Using different sources of data is aligned with theoretical sampling employed in this research (Charmaz, 2006) and similar logic was used to find appropriate sources of information.

This written information was treated in a similar fashion to transcripts from interviews with some further considerations as follows: The collected information was already published and publicized, hence there were no concern for confidentiality and copyright (Gray, 2009). However, these sources of secondary information might be biased by their authors' worldviews and interests (Gray, 2009), which may influence the reliability of conclusions in this research. To minimize this risk, only information from trusted [9] organizations was collected. Furthermore, this secondary information was compared with other sources, whenever possible, to triangulate their credibility. The samplings and data collection were continued until saturation of emerging categories and themes (Charmaz,

[9] Trusted in this situation is related to organizations that are legally authorized and are identified as a formal identity.

2006), which also limits the boundaries for data collection in this research and is further discussed in the following section.

4.5.2.6 Category Saturation and Defining the Boundaries of Cases

While in this research different restrictive factors such as specific geographical locations and sectors or industries are used to limit the boundaries of the case studies and find more focused data (Yin, 2014), theoretical sampling and category saturation were employed to identify the margins for data collection and number of interviews (Holton et al., 2007; O'Reilly & Parker, 2012; Silverman, 2013). Data collection was continued until a reasonable and clear picture of the categories emerged (Charmaz, 2006; LaRossa, 2005; Suddaby, 2006), which is the logic behind the sample size in Grounded Theory (Charmaz, 2006; Goulding, 1998; O'Reilly & Parker, 2012). The process was dependent on the quality of data collected in the preceding stages of data collection. The richness of previously-collected data suggested the number of interviews and led the researcher through the process of data collection (Morse, 2010; O'Reilly & Parker, 2012).

The categories saturated when incremental learning was minimal (Eisenhardt, 1989a). The concept of saturation was not used as synonymous to repetitions in data by acquiring similar information from the data sources, as many researchers use them interchangeably (Charmaz, 2006; Goulding, 1998; Holton et al., 2007; Morse, 2010; O'Reilly & Parker, 2012). It was used for clarification and finding more detailed information about the emerging themes and categories that further the theoretical insight about the roles and strategies that sustainability-driven entrepreneurs have in transitions of their socio-technical systems (LaRossa, 2005; Morse, 2010). In this research saturation occurred when different dimensions of entrepreneurial roles were identified and subsequent interviewees could not add to the richness and depth of data about this entrepreneurial actions. Dimensions such as “how entrepreneurial actions took place”, “who was involved”, “what were the consequences”, “what were the relationships with other actions”, and “how they were evaluated”, were checked and discussed with the participants to ensure that a comprehensive picture of such actions was being considered. During the process of data collection, the procedures of Grounded Theory were used to analyze the collected data, as discussed in the following section.

4.5.3 Data Analysis

Strauss and Corbin (1998) define data analysis as "*interplay between researchers and data*" (page 13). Different levels of data analysis are identified in Grounded Theory as descriptive, conceptual ordering, and theory-making (Goulding, 1998; LaRossa, 2005; Martin & Turner, 1986). At the descriptive level, different labels and wordings are used to portray a situation, an experience, or a person's perspective among others, while conceptual ordering is about giving order to these descriptions (Goulding, 2002; Holton et al., 2007; Strauss & Corbin, 1998). The descriptive level is the basis for conceptualizing and generating theory out of data (Goulding, 2002; Strauss & Corbin, 1998). Theory-making is the final stage of this procedure, which results in "*a set of well-developed categories (themes, concepts) that are systematically interrelated through statements of relationship to form a theoretical framework that explains some phenomenon"* (Hage, 1972, p. 34). Influenced by the main aim of the research for having theoretical contributions inductively, all three levels of coding are essential and their practical details are explained in the following section.

4.5.3.1 Coding

Qualitative coding, which is "*the process of defining what the data are about*" (Charmaz, 2006, p. 43), is the initial stage for data analysis (Goulding, 2002). The data is sorted into categories and enables the researcher to make comparisons among different segments (Charmaz, 2006; Gephart, 2004; Holton et al., 2007). Based on Charmaz's version of Grounded Theory, coding can take place at three main stages: (1) initial coding, which adds labels to each word, sentence, or statements, (2) focus coding, which is the selection among the initial codes to find the most important patterns and organize large amounts of data, and (3) theoretical coding, which explains how substantive codes and categories, resultant from focus coding, can be integrated with each other to inform the theoretical foundation in relevant literature (Charmaz, 2006, 2014; Goulding, 2002).

Initial coding can be conducted through word-by-word, line-by-line, or incident-to-incident analysis. With all of these methods, data will be compared with data, and codes with data and other codes, to find similarities and differences (Charmaz, 2006; Goulding, 2002). This research employed incident-by-incident coding, within each case separately, at the initial stage. This approach was appropriate for this study as the main purpose of the research is to generate an in-depth understanding of entrepreneurial actions. As such,

using incident-by-incident coding retained the integrity of information about particular actions taken by entrepreneurs, while allowing the researcher to classify them into categories. The transcribed files were broken down into separated pieces and appropriate labels were used to describe the events in the data (Goulding, 2002). Whenever possible, gerunds were used for labeling the codes. Gerunds emphasize actions and procedures, which facilitated the coding at the descriptive level (Charmaz, 2006) and helped the researcher to maintain contact with the data (Glaser, 1978; LaRossa, 2005).

Memos and notes, created in the data-collection process, were used by the researcher at this stage to recall situations (Goulding, 2002; Martin & Turner, 1986). Moreover, during coding, audio files of the interviews were listened to again to find a better sense of the data and events, considering feelings and expressions of the interviewees. New notes were written down to record the emerging thoughts during the coding process (Goulding, 2002; Martin & Turner, 1986), which were used for conceptual coding, and theoretical development in the subsequent stages. During the initial coding, the main goal was to stay open to emergent ideas and directions led by inductive reasoning. This was followed by focus coding and finding connections between emerging patterns, which resulted in themes that were categories of interconnected codes (Charmaz, 2006; Goulding, 2002). Charmaz (2006, p. 59) defines focus coding as "*using the most significant and/or frequent earlier codes to sift through large amounts of data*". Comparing emerging themes with new data, and themes with other themes, refined the findings and evaluated the construct of the research (Eisenhardt, 1989a).

In this stage, emerging themes were compared with relevant literature of Sustainability Transition. The main activities for niche development abstracted from Strategic Niche Management literature were identified as an appropriate classification for emerging categories. The constant comparison between emerging themes and literature continued to the final stages of coding. As the result, the themes were refined, connections between the themes were developed, and categories formed. The outcome of these two stages formed the descriptive and conceptual level of the results that are presented in Chapter Five and Six. Furthermore, comparison with new literature led the researcher to an appropriate theoretical lens, i.e. Evolutionary Theory of Organizational Change, to explain the interactions at micro level. As discussed in Chapter Three, this literature was identified as effective and relevant, since it discusses the emergence of new organizational forms

and explains how populations and communities of organizations change through time, that may result in wider changes at regimes level.

Following the focus coding, theoretical coding investigated the possibility of relationships among different categories (Charmaz, 2006) by using the extant literature of Evolutionary Theory and Sustainability Transition (Ridder et al., 2014). While the literature in Sustainability Transition offers an appropriate lens for wider classification of the findings and explains the dynamics at the system level, Evolutionary Theory clarifies the interactions among units of analysis (among entrepreneurs and other actors) and describes them in a theoretical language. The results from theoretical coding explain the themes by analytical stories, with coherence. In this stage, the researcher defined the general contexts and specific conditions in which particular actions could take place. The outcomes defined the procedures and structures in the Cases, and comparison with the extant literature in Sustainability Transition and sustainability-driven entrepreneurship highlighted the theoretical contributions and theorized how sustainability-driven entrepreneurs and other actors deal with different circumstances (Charmaz, 2006). The results of this stage formed the theoretical level findings that are presented in Chapter Seven. NVivo software was used to facilitate coding in the above-mentioned processes, which is further discussed in the following section.

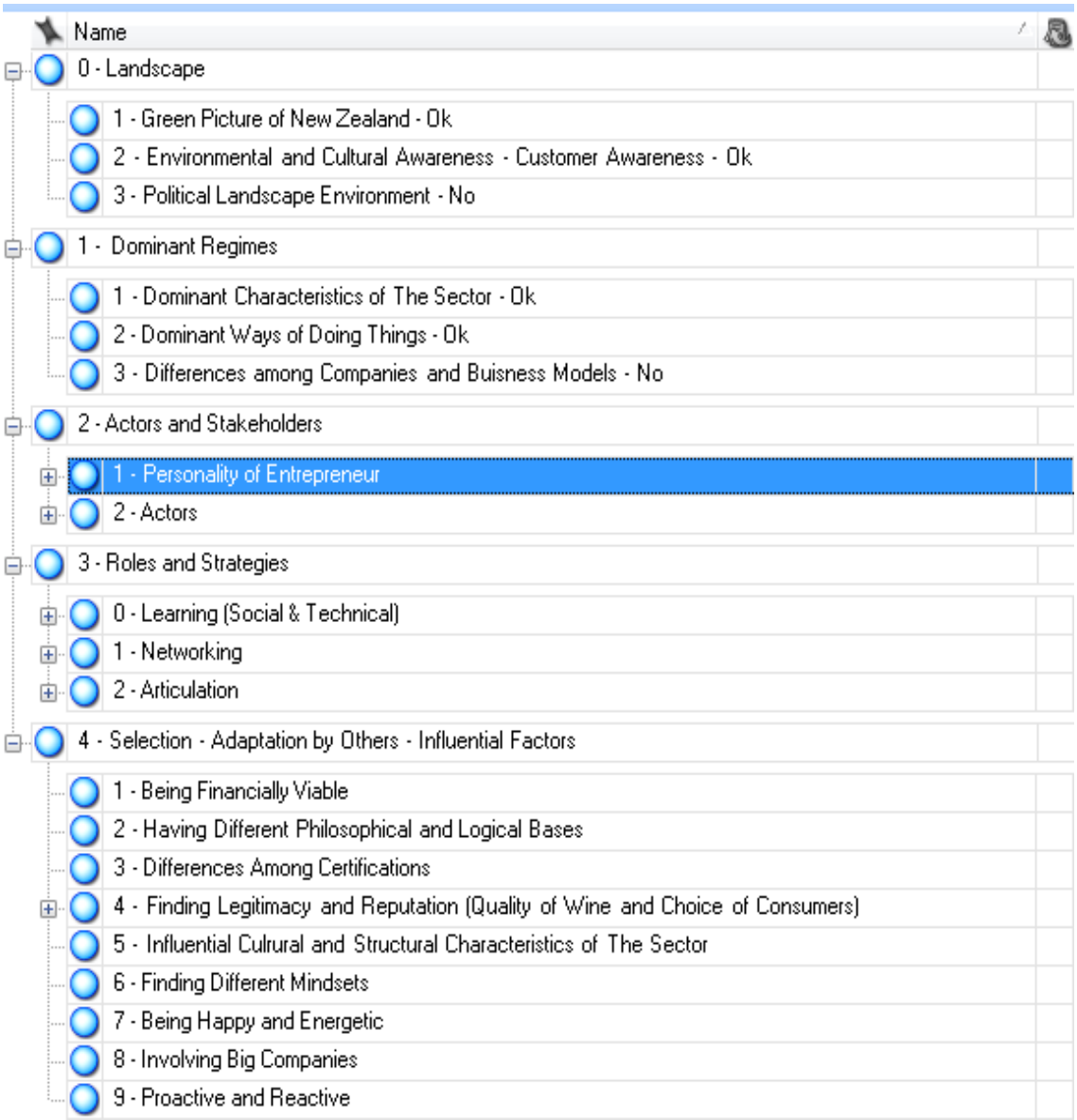
4.5.3.2 CAQDAS/NVIVO SOFTWARE

Computer Assisted Qualitative Data Analysis Software (CAQDAS) were used to manage and analyze the collected data. The application of this software facilitates the process of coding by enabling the researcher to effectively get engaged in data analysis and insight generation rather than managing and organizing the large amount of data (Atherton & Elsmore, 2007; Gephart, 2004; Morse, 2010; Sinkovics & Alfoldi, 2012). However, they are criticized for lack of sophistication in coding process by employing simple quantification methods – such as key words counts – and decontextualizing compared to other more flexible methods of data analysis (Atherton & Elsmore, 2007; Sinkovics & Alfoldi, 2012).

Different software are available for this purpose such as Atlas.ti, HyperRESEARCH, NVivo, or The Ethnograph (Yin, 2014). In this research, NVivo qualitative data analysis software (QSR International Pty Ltd. Version 10, 2012) was used to create an integrated database of collected data, and to help organize the coding process and data analysis. Simple quantification methods and automatic coding capacities of NVivo were not used in this

research; hence the above-mentioned criticisms are not relevant. The main reason for choosing NVivo software in this research, from among other CAQDAS software, was the availability of the license in the University of Otago. In order to use NVivo, all transcripts and documents were imported into this software. The incident-by-incident procedures were used for initial coding and then themes emerged by grouping the initial codes using 'nodes' in NVivo software. A group of related nodes classified under 'parent nodes' in a hierarchical order as shown in Figure 4-7 from one of the case studies in this research.

Figure 4-7 Example of the coding structure from NVivo Software



Researchers use different terms for analyzing data such as code, category, and concept. There are no exact definitions of these terms and different researchers have used them interchangeably (LaRossa, 2005). Better models use these terms in a hierarchical approach (Bryant & Charmaz, 2010), which is compatible with the hierarchical structure in NVivo

using 'nodes' and 'parent nodes' as it is shown in Figure 4-7. In this research, the term 'coding' is used to explain the process of data analysis, the term 'code' is used to explain the outcomes from initial coding; the term 'themes' is employed to explain the outcomes at conceptual level; the term 'category' is used for a group of themes; and the term 'theoretical insights' refers to the outcomes from theoretical coding, which is presented in Chapter Seven.

The application of NVivo software eased the revisions at later stages of the writing and rewriting. It facilitated the cyclic process between data collection, coding, and reporting (Sinkovics & Alfoldi, 2012), which is essential for conducting a robust qualitative research. The results are presented in three different chapters as further discussed in the following section.

4.5.4 Reporting the Results

Different approaches can be used to present findings such as textual and non-textual material, in a case study research. Non-textual material can be categorized into drawings, tables, figures, and charts among others (Gray, 2009; Yin, 2014). The main method for presenting the results in this research is through textual reports. However, diagrams and conceptual models are used at different instances for more clarification. The presentation of the findings in this research is based on one of the proposed forms from Gray (2009) for multiple case studies as shown in Table 4-4. The findings from each case are presented in a separate chapter and then in the discussion chapter, the cases are presented in more depth with theoretical language and a cross-case analysis is conducted.

Table 4-4 Outline of the report in this thesis

<table>
<tr><td rowspan="2">Multiple embedded case studies</td><td>Narrative case study 1 – Chapter Five</td><td rowspan="2">Discussion and cross case analysis – Chapter Seven</td></tr>
<tr><td>Narrative case study 2 – Chapter Six</td></tr>
</table>

Source: abstracted from (Gray, 2009)

In this research, the process of presentation started at the final stage of data collection when there was a reasonable and comprehensive understanding of major themes in the findings. However, the process was iterative (Smith et al., 2013) and several drafts were produced through the course of the study. Preparing the initial drafts at the final stage of

data collection helped to identify gaps in the collected data and led to a further search for relevant participants and information. During this process, the findings were presented at four conferences which resulted in constructive feedback. Writing and rewriting, in response to comments and suggestions, improved the outcomes and the presentations of the findings in this study (Yin, 2014).

4.6 CONCLUSION

This chapter presented the research design of this thesis. It represented the research objectives and research questions and introduced a logical plan to address these complexities. The nature of this research topic and subjectivity to different worldviews resulted in an interpretivist research paradigm and a hermeneutic research method. As explained, a qualitative case study informed by coding procedures of Grounded Theory was employed to address the above-mentioned criteria. The outcomes of this process are presented in the following two chapters.

Chapter 5 *CASE 1: ETHICAL AND ORGANIC SHOPS IN NEW ZEALAND*

Small shops are able to really, kind of, dig a bit deeper in terms of the story that they are telling around Fairtrade, and also more talking about organics, and what it is. You know, they are really able to come and communicate a bit more deeply about those messages, and again, you know, tailored to consumer needs. [interviewee Edward]

This chapter examines how ethical and organic entrepreneurial shops in the retail sector of New Zealand play roles in creating a strong niche, which eventually may scale up to change the dominant trends in their sector towards more socially- and environmentally-friendly practices. It explains how small and medium shops, started by entrepreneurs, create new organizational forms and influence the wider characteristics of the retail sector in Dunedin and consequently New Zealand. It is worth mentioning that broader adoption of these environmentally-friendly and socially-inclusive practices is different from becoming mainstream. That is when these new trends lose their contrarian character and shift to be aligned with the dominant norms because of sociopolitical pressures (Child, 2014). It means finding legitimacy among wider audiences and changing the taken-for-granted among those stakeholders. The sustainability-driven entrepreneurs in this case have priorities for social dimensions (Mann, 2008) of sustainability innovation rather than environmental aspects and the results inform the literature on sustainability-driven entrepreneurship and Sustainability Transition. The chapter begins with information about the retail sector and its characteristics in New Zealand. It continues by explaining the social and environmental problems and introducing some of the solutions employed by stakeholders in this sector. The next section discusses the sustainability-driven entrepreneurs' life experiences and how their intentions took form to initiate their new practices. Following this, the chapter examines how entrepreneurial shops employ strategies to justify and legitimize their actions. The chapter ends by describing how socio-economic factors influence the wider effects of entrepreneurial strategies, and identifying the important actors who are helping entrepreneurs through these processes.

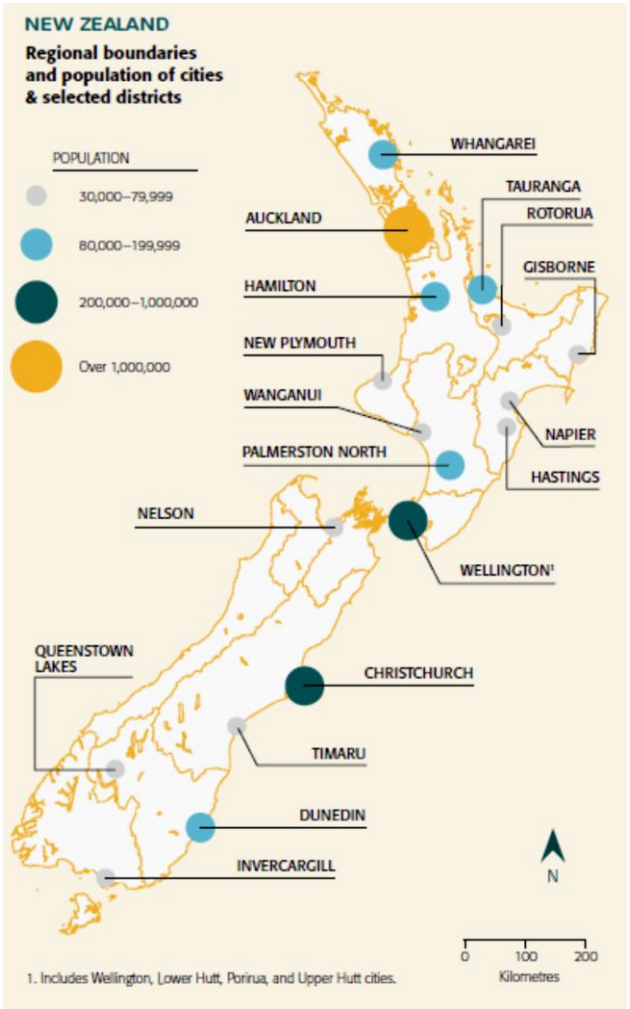
5.1 Landscape Characteristics: Retail Sector in New Zealand

Traditionally, retail was defined as the distribution of goods and services to end users for consumption by the purchaser and not for resale purposes (Lai, Cheng, & Tang, 2010). However, this role has significantly changed over time and retail shops play a major part in the value chain of products, the marketing of new goods, and the distribution of information among consumers (Jones, Comfort, Hillier, & Eastwood, 2005a; Lai et al., 2010). The retail sector is one of the most diverse and dynamic sectors (Erol, Cakar, Erel, & Sari, 2009; Jones, Hillier, Comfort, & Eastwood, 2005b), which is influenced by a range of actors and different socio-economic criteria. These characteristics make this sector

important to investigate and complicated to explain, and the New Zealand market is not an exception.

New Zealand is a small country, having a population of around 4,509,700 (Est. June 2014) (Statistics New Zealand, 2015a). The population is denser in the northern part of the country and becomes sparse moving towards the south as shown, in Figure 5-1. The city of Dunedin, where this research initially started, has a population of less than 200,000 people (Statistics New Zealand, 2015a). It is known as a university town, because the socio-economic environment is highly influenced by the presence of the University of Otago and a large portion of the population are students.

Figure 5-1 Regional boundaries and population of cities

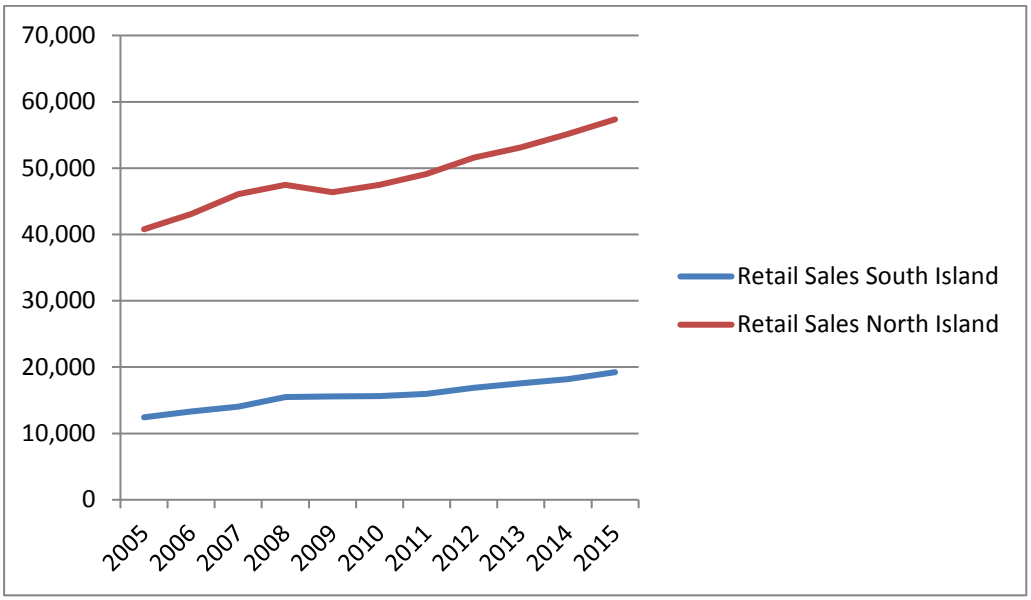


Source: (Statistics New Zealand, 2015a)

New Zealand is a young country and the economy has been based on trade, hence retail is an integrated part of the economy (Parsons & Wilkinson, 2014). The New Zealand government deregulated the market in the 1980s and since then there has been no

restriction on the import of goods and services. The three top importing countries to New Zealand are Australia, China, and the United States of America (Statistics New Zealand, 2015a). There were 32,972 retail outlets in New Zealand in October 2012 (Statistics New Zealand, 2015a), however transactions in the North and the South Islands are quite different, as shown in Figure 5-2. The transactions in the North Island are almost four times the transactions in South Island, which may stem from the differences between the densities of the populations mentioned before.

Figure 5-2 Comparison between North and South Island retail sales Millions $/Year



Source: (Statistics New Zealand, 2015b)

As a small-scale market with isolated geographical location, options in the retail sector are limited compared to European countries, and they are usually centered in main cities with limited options are available outside those areas (Parsons & Wilkinson, 2014). The geographical location of New Zealand and the scattered structure of retail centers across the country add to the cost of logistics and distributions, and result in more expensive products. This notion may influence the South Island more than the other parts of this country as the density of the population is much lower (Parsons & Wilkinson, 2014). It may also influence the practices of small-scale shops such as the sustainability-driven entrepreneurs in this case study, as they have to overcome the above-mentioned difficulties in their logistics.

Nevertheless, the market of New Zealand is still diverse with the presence of different brands and big shopping centers, such as Westfield, in most of the cities across the country

(Parsons & Wilkinson, 2014). Australian retail chains have a strong presence in this market and Australian brands such as Countdown, Cotton-on, and Kmart work throughout the country. New Zealand customers have adopted an international lifestyle. Yet some of the New Zealand customers have a preference to buy from local producers (Parsons & Wilkinson, 2014), which to some extent helps them protect their local economy and decrease their natural footprint. In summary, similar to many countries, New Zealand's market is influenced by large corporate cultures in spite of the effort that some people put into support of local producers. This corporates culture, which promotes consumerism, has resulted in different social and environmental problems, discussed in the following section.

5.1.1 Regime Norms and Externalities: Social and Environmental Issues in the Retail Sector

The retail sector is dominated by large-scale retail departments, who aggressively use sales strategies to expand their market share and profit. They are powerful actors and can influence other parts of the supply chain with their decisions (Erol et al., 2009; Jones et al., 2005b; Kotzab, Munch, de Faultrier, & Teller, 2011; Wiese, Kellner, Lietke, Toporowski, & Zielke, 2012) such as the types of product they want to sell and their marketing strategies (Erol et al., 2009). With a similar logic, they can influence the standards of sustainability across supply chains with their choices, such as their actions for logistics or their environmentally-friendly practices within their physical shops (Wiese et al., 2012).

In current regimes, the dominant norms in the retail sector promote consumerism by providing the cheapest possible prices available in the market, without considering the social and environmental effects of the products. Most of the producers work based on mass production principles, which disconnect the resources of production and the main producers of products from the final consumers (Hira & Ferrie, 2006). These strong institutions and continuous encouragement for growth (Jones et al., 2005b) have posed a threat against the sustainability of nations and caused serious social and environmental problems, both in producers' communities and consumers' environment, and New Zealand is not separated from these trends.

The principle of profit maximization for shareholders, which is a dominant norm in corporate cultures, may disqualify some of the activities that employ inclusive strategies towards different actors involved in the value creation of products (Audebrand &

Pauchant, 2009; Mann, 2008). These strong norms may discourage some of the businesses to employ socially- and environmentally-responsible strategies, since there have not been positive relationships between social issue participation and revenue creation for businesses (Hillman & Keim, 2001). Consequently, large corporates that are interested in maximizing profit for their shareholders may find it difficult to employ proactive social and environmental strategies to address the above-mentioned issues. Moreover, criteria such as premium price, limited range, and skepticism about certifications may also hamper the wider adoption of such practices (Hira & Ferrie, 2006; Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007).

Nevertheless, there are still some positive signs towards addressing the social and environmental degradation. Raising awareness among consumers about severity of social and environmental problems and their power as consumers (Wiese et al., 2012) and environmental issues that originated from packaging and logistics of the retail shops have attracted attention in recent years (Lai et al., 2010). Moreover, there is a rising interest for environmentally-friendly and ethically-produced goods among consumers (Bezençon & Blili, 2010; Hira & Ferrie, 2006; Kotzab et al., 2011; Lai et al., 2010). For example, organic foods have had one of the biggest growths in the food industry, although, it is still a small percentage of the market (Hughner et al., 2007). Likewise, Fairtrade products have experienced an approximate 187 percent growth from 2004 to 2007 (Bezençon & Blili, 2010). Then again, the market share compared to other ranges of products is quite small (Moore, 2004). Trudel and Cotte (2009) argue that some consumers are willing to pay more for ethically-produced products, which could challenge the common theories about consumers' rationality as economic agents (Bezençon & Blili, 2010; Mann, 2008). However, there is still no consensus among researchers about the percentage of these consumers and their effects on the market (Moore, 2004), and employing socially- and environmentally-friendly practices in this sector is a challenging endeavor. Nevertheless, some of the actors have employed strategies to address these changing trends, as discussed in the following section.

5.1.2 Alternative Practices in the Retail Sector at Niche Level

Several reasons, such as increasing consumer awareness and the spotlight of social media, have encouraged retail shops to utilize more socially- and environmentally-friendly

practices (Child, 2014; Jones et al., 2005a; Jones et al., 2005b). The personal motivation of proactive entrepreneurs and top managers ((Kotzab et al., 2011) adds another dimension to these reasons. The promulgation of sustainability rules by large corporations such as Tesco (energy-saving activities), Co-op (selling Fairtrade food products), and John Lewis (controlling the timber used in its products to have the least environmental effect) are examples of these practices, which have been collectively named 'green retailing' (Hughner et al., 2007; Jones et al., 2005a). Nevertheless, different interpretations of this concept have resulted in complexities affecting implementation (Hira & Ferrie, 2006), and research has overlooked retail's role in this regard as an intermediary between suppliers and consumers, which is crucial for value creation through the life cycle of the products (Lai et al., 2010).

The range of definitions for green retailing could be diverse; from green procurement to green store design and energy and water conservation of retail shops (Lai et al., 2010; Trudel & Cotte, 2009; Wooliscroft, Ganglmair-Wooliscroft, & Noone, 2013). Adding to this complexity, there is no consensus among researchers about ethical consumption (Moore, 2004; Wooliscroft et al., 2013) and definitions of ethical consumerism may vary across locations and time depending on priority of personal, environmental, social, and political concerns (Wooliscroft et al., 2013). In one of the broader definitions, Lai et al. (2010) outline three dimensions for retail shops that employ sustainability-oriented practices as: (1) internal Improvement; (2) external Coordination; and (3) supportive development; as shown in Table 5-1, which resonates a more comprehensive view towards this concept.

Table 5-1 Different dimensions of environmentally-friendly retailing and their definitions

Dimensions	Definition
Internal Improvement	Activities such as utilizing systems or devices in the store that helps energy saving and/or using more efficient transport systems
External Coordination	Activities such as purchasing environmentally-friendly products, cooperating with suppliers in designing environmentally-friendly products or packaging, educating consumers and raising their environmental awareness and decreasing their after-sale consequences
Supportive Development	Activities such as having environmentally-friendly commitments, supporting research and development for environmentally-friendly technology and products, and promoting employee participation

Source: (Lai et al., 2010)

In New Zealand, different strategies are employed by a diverse range of actors to promote green retailing (Kirkwood & Walton, 2010; Parsons & Wilkinson, 2014). As mentioned before, some New Zealanders are interested in locally-made, locally-sourced goods. Consequently, there are local markets such as farmers markets in almost all parts of the country and in different cities and towns (Essential New Zealand, 2015). These markets support local small-scale farmers and producers to sell their products directly to consumers. Furthermore, bigger and more established organizations such as 'Trade Aid' promote ethical consumption and make such products available for interested consumers in New Zealand's market. They are certified[10] by the World Fair Trade Organization (WFTO)[11] and work towards community developments in impoverished societies (Trade Aid, 2015). Other smaller-scale retailers such as REcreate also sell ethically-made products in New Zealand's market (REcreate, 2015). Similar to the latter, there is a raising interest among small-scale retail shops and entrepreneurs to promote and sell environmentally-friendly, ethically-produced goods in New Zealand. This case study explicitly investigates these entrepreneurs.

Building on the definition of green retail shops discussed earlier and presented in Table 5-1, this case study investigates small entrepreneurial retailers that cooperate with other actors across the supply chain to sell environmentally-friendly and ethically-produced goods in the New Zealand market. It focuses on the second group of green retailers (external coordination) by adding aspects of ethical consumption such as workers' rights, Fairtrade, and country of origin (Wooliscroft et al., 2013). It investigates pioneer entrepreneurs that start their retail shops to sell organic and ethical products that

[10] Six main fair trade organizations, which other smaller entities work under are: (1) International Fair Trade Association (IFAT), (2) Fairtrade Labeling Organizations International (FLO), (3) Network of European Shops (NEWS), (4) European Fair Trade Association (EFTA), (5) International Federation for Alternative Trade (IFAT), (6) Fair Trade Federation. Moreover, FINE is an informal group consisting of FLO, IFAT, NEWS, and EFTA (Moore, 2004). There are other organizations and labeling groups working across different locations.

[11] "The World Fair Trade Organization (WFTO) is a global network of organisations representing the Fair Trade supply chain. Membership in WFTO provides Fair Trade organisations with credibility and identity by way of an international guarantee system, a place of learning where members connect with like-minded people from around the world, tools and training to increase market access, and a common voice that speaks out for Fair Trade and trade justice – and is heard."(WFTO, 2015a)

may solve some of the social and environmental issues across different actors involved in the lifecycle of products. These retail shops may incorporate two other dimensions of green retailing such as minimizing waste or packaging, or supporting sustainable development initiatives. However, the main criterion for selection was the second aspect. These entrepreneurs can be categorized into two main groups of (1) Fairtrade; and (2) organic shops; as presented in Table 5-2 and further explored next.

Table 5-2 Definitions of organic and Fairtrade shops as alternative retail practices

Alternative environmental practices	Definition
Fairtrade retail shops	Selling Fairtrade products. Fairtrade can be defined as "*a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalised producers and workers – especially in the South*" (Moore, 2004; WFTO, 2015b, p. 73)
Organic retail shops	Selling organic products. Organic farming can be defined as "*a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved*" (IFOAM, 2015; NZW, 2015c)

The Fairtrade network uses its own channels of sourcing and distribution for its products to develop a traceable supply chain, in order to improve the lifestyle of the producers in communities that need further support (Goodman, 2004; Mann, 2008; Moore, 2004). The major percentage of Fairtrade sales goes back to the original producers for community development purposes, promoting a better lifestyle and quality of life and empowering producers over their own life (Audebrand & Pauchant, 2009). Although addressing environmental problems such as global warming or climate change is not the first priority for Fairtrade, whenever possible, environmentally-friendly productions and approach are employed across their supply chain. On the other hand, organic shops sell organic products that are presumed to be environmentally-safe and designed to minimize

negative effects on the physical environment by reducing the use of dangerous and poisonous chemicals for production. Yet again, similar to Fairtrade shops, organic shops also pursue other objectives such as supporting small scale and local producers with lower priorities. These businesses connect producers of such products with interested consumers and try to package and recycle products in a manner that is sensitive or responsive to ecological concerns. The following section explains the process of data collection and presents detail of participants in this case study.

5.2 Data Collection

The research was initiated by focusing on the city of Dunedin in New Zealand, however the complexity of the retail sector and connectivity of networks in this industry made it necessary to look at other parts of the country or the broader networks among the producers and Fairtrade co-operatives in other countries. Dunedin was selected because there were good examples of organic and ethical shops available in this city. Furthermore, the city council had obtained a Fairtrade certificate in 2009. Certifying Dunedin as a Fairtrade city brought broader legitimacy and support for Fairtrade and ethical activities in Dunedin. Moreover, being part of Transition Network (Network, 2016) and the popularity of local markets, such as farmers' markets, promote activities for small-scale, organic, and local production in Dunedin city. These characteristics make Dunedin an appropriate context for the purpose of this study, whose results can be expanded to other similar locations with comparable scales and institutional logic.

As discussed in Chapter Four, purposeful sampling was employed to gain access to suitable sources of information for this case study. The five sustainability-driven entrepreneurs comprising the sample include physical shops, online stores, and businesses selling their products in farmers´ markets. These five were selected at the initial stage based on the definition provided in this chapter and the criteria described in Chapters Two and Four. Details for how the sample members meet criteria 2 and 5 (mention in Section 4.5.2.2) are shown in Table 5-3 to Table 5-7. It was confirmed that they all meet criteria 1 and 4 (founded and still run by entrepreneurs who are pioneers in their field) in the interviews, with triangulation from websites and media reports on their organizations. Criterion 3 (financial viability) is potentially a tricky consideration, as all of these organizations are

private and do not release their financial records. The word of the entrepreneurs was accepted in this regard, with corroboration sought from interviews with other actors in their business environment as well as based on the longevity of the business itself.

Table 5-3 Pseudonyms and characteristics of SE – 1.1 – Fairtrade and organic retailer

Alice – SE - 1.1		preservation and advancement in any of	
		Nature	Community
By introducing new	Products	Preserving nature by selling organic products Preserving nature by selling recycled and preloved items	Supporting community of producers by selling Fairtrade products
	Processes	Preserving nature by minimizing packaging	Supporting community of organic producers Supporting community of Fairtrade producers
	Services		

Table 5-4 Pseudonyms and characteristics of SE – 1.2 – Organic retailer

Clare & Peter – SE - 1.2		preservation and advancement in any of	
		Nature	Community
By introducing new	Products	Selling organic products	Supporting community of local small scale producers by selling their products and offering support
	Processes	Preserving nature by using environmentally friendly settings and equipment in the shop Preserving nature by minimize packaging	Supporting small scale producers by working directly with small scale local producers
	Services	Preserving nature by introducing self-service organic eatery	Supporting local people by encouraging and offering support for growing organically

Table 5-5 Pseudonyms and characteristics of SE – 1.3 – Fairtrade and organic retailer

Michael – SE - 1.3		preservation and advancement in any of	
		Nature	Community
By introducing new	Products	Preserving nature by selling organic Fairtrade cotton in NZ	
	Processes		Supporting community of producers by working directly with small scale Fairtrade producers
	Services		

Table 5-6 Pseudonyms and characteristics of SE – 1.4 – Ethical retailer

Leanne – SE - 1.4(winner of the social enterprise NZ, among Forbs 30 outstanding Vietnamese under 30)		preservation and advancement in any of	
		Nature	Community
By introducing new	Products	Preserving nature by selling organic products	Supporting community of local small scale producers by selling their products and offering support
			Supporting communities by working directly with small scale disable producers
	Processes		
	Services		

Table 5-7 Pseudonyms and characteristics of SE – 1.5 – Organic retailer

Robert – SE - 1.5		preservation and advancement in any of	
		Nature	Community
By introducing new	Products	Preserving nature by selling organic products	Supporting communities of local small scale producers by selling their products and offering support
	Processes	Preserving nature by using environmentally friendly settings and equipment in the shop Preserving nature by minimize packaging	Supporting communities by working directly with small scale local producers
	Services		Encouraging and offering support for growing organically

The findings from this initial stage identified the major patterns of entrepreneurial actions in the business environment. These findings were used for theoretical sampling to approach more relevant actors among the people who were involved in entrepreneurial actions, as discussed by the sustainability-driven entrepreneurs in the first stage of interviews. These actors were selected because they could explore and add to the dimensions and thoroughness of the results from the initial stage. Table 5-8 shows the other participants in this research. Furthermore, other sources of data such as websites and social media pages of the retail shops and related organizations, and media news were also used as secondary sources of data to generate a deeper understanding about the situation and connect pieces of information.

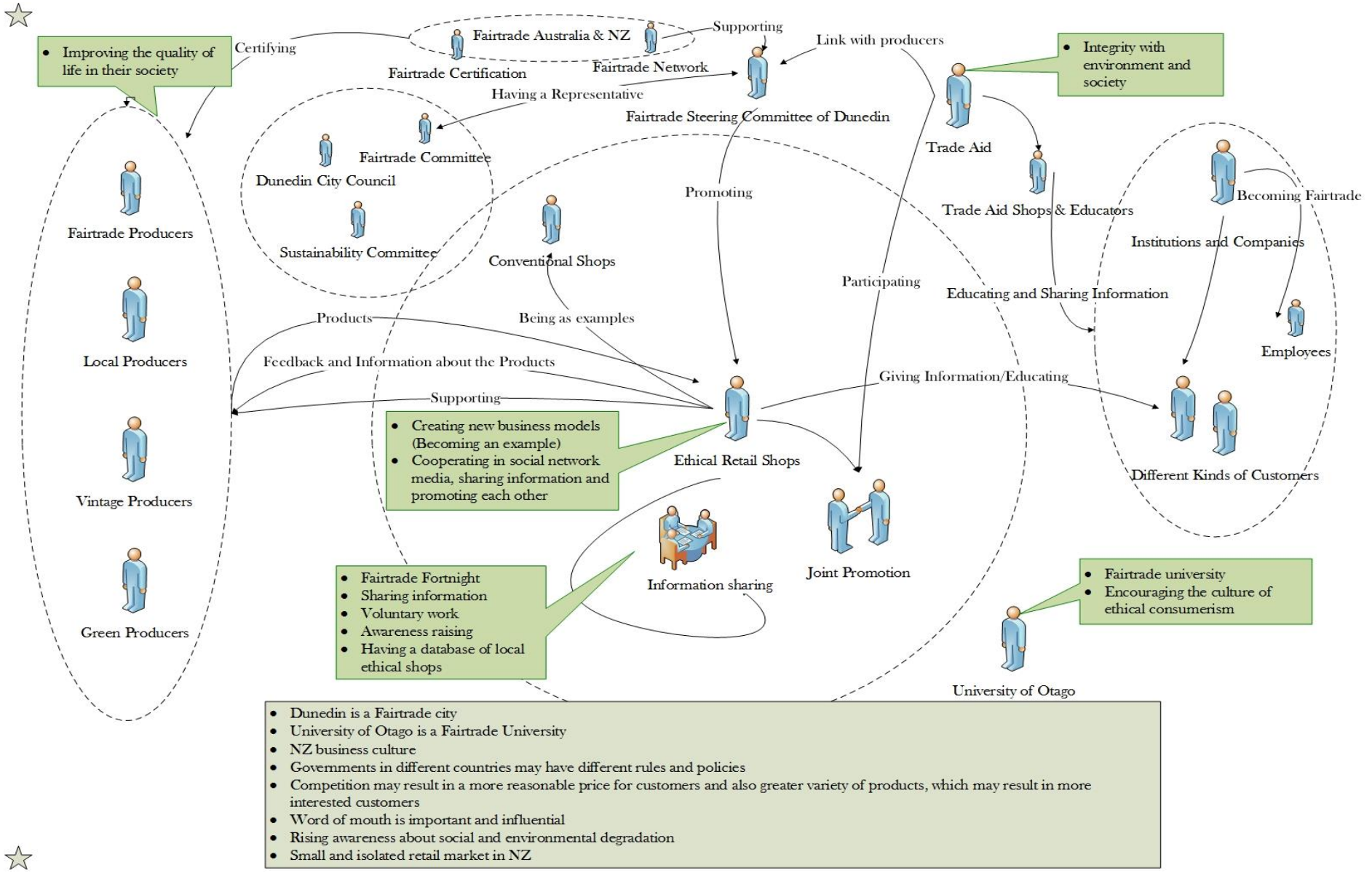
Table 5-8 Pseudonyms and characteristics of other actors interviewed in this case study

Pseudonym	Role	Position
Rebecca	OA – 1.1	Fairtrade steering committee - Dunedin city councilor
John	OA – 1.2	Faire Trade Co-operative
Mary	OA – 1.3	Fairtrade Co-operative
Oliver	OA – 1.4	Fairtrade Co-operative
Rachel	OA – 1.5	Otago University Student Association - Fairtrade officer
Edward	OA – 1.6	Fairtrade Australia-New Zealand Business Developer
Lisa	OA – 1.7	NZ Trade Aid steering committee member
Geoffrey	OA – 1.8	Dunedin Fairtrade steering committee chairperson
Isaac	OA – 1.9	Dunedin Trade Aid steering committee member
Sam	OA – 1.10	Organic producer
Sonia	OA – 1.11	Fairtrade co-operative

Graphical representations of the situation were used during the interviews for enriching the discussions. These pictures (some of which are shown Appendix Five) were developed during the course of data collection and revised after each interview based on the information provided by the participants. The pictures were used to show the main actors and interactions among these actors who were involved in entrepreneurial strategies of sustainability-driven entrepreneurs and abstract the previous discussions into simple presentation. Application of the pictures stimulated the discussions between the researcher and the interviewees, which resulted in confirmation, revision, or addition of more details to previous findings. These pictures enabled the researcher and the interviewees to discuss details while having a bigger picture of the situation in mind.

Figure 5-3 shows the final picture that was used in this case study. It represents the most important actors in the situation and describes the relationships among them.

Figure 5-3 The Final rich picture of the retail sector



5.3 FINDINGS

The results in this case study are presented in four main sections. The first section, 'Background and Intentions of Entrepreneurs', is a category of findings that explains how life-experience of sustainability-driven entrepreneurs helps them to identify a gap in the market and shapes their intentions to address their social and environmental concerns through their businesses. Then, the next section examines how sustainability-driven entrepreneurs play a variety of roles and use different strategies to develop their new models and legitimize their new practices. The presentation in this section is influenced by the literature from Strategic Niche Management where it is categorized into two main parts: learning and networking as two main activities for forming a robust niche. No significant strategies were identified for articulation of meanings and expectations as the other main activity in development of a niche. The third section identifies the key socio-economic factors that influence the wider effects of entrepreneurial roles followed by the actors, who are identified as influential in the previous mentioned themes. The findings are presented in three different perspectives whenever needed: (1) the sustainability-driven entrepreneurs (SE - participants in Table 5-3 to Table 5-7); (2) the other actors (OA - participants in Table 5-8); and (3) all the participants. Whenever necessary, the number of 'codes' resulted from the initial coding process is mentioned to support the arguments. These numbers clarify the instances that participants have stated or discussed a specific topic of interest in the incident-by-incident coding process.

5.3.1 BACKGROUND AND INTENTIONS OF ENTREPRENEURS

This section of findings examines how the life experience of sustainability-driven entrepreneurs shapes their values towards social and environmental problems and how this notion forms their intentions to commence their businesses that depart from current routines in their business environment. It discusses the passion and emotional attachment of the sustainability-driven entrepreneurs to their wider social and environmental objectives that may encourage them to persist on their goals and take actions to convince other actors. It also discusses the lack of experience among some of the sustainability-driven entrepreneurs and how this may influence their performance during this gestation process. While this section does not directly answer the research questions in this thesis, it was necessary for contextualization of the findings in other sections and provide appropriate background data for the following discussions. This section is presented in

three major themes: (1) life experiences with social and environmental movements, (2) business as a means to an end, and (3) lack of business experience.

5.3.1.1 Life Experiences with Social and Environmental Movements

All the sustainability-driven entrepreneurs in this research were involved in different activist, voluntary, or producers' groups even before starting their businesses. For example, Alice - SE - 1.1 was involved with the Fairtrade committee and other environmental campaigns about global warming and reducing waste in Dunedin. Likewise, another entrepreneur, Leanne - SE - 1.4, who supports disabled producers in Vietnam by selling their products in New Zealand's market, reported about her experience working as a volunteer in United Nations camps. She explained that her interactions with people in those camps raised her awareness about their problems and discussed how selling products produced by those people, would bring them the required financial resource to purchase their necessary medicines:

> *Outside the store, I am involved a lot with the Fairtrade committee. I have been involved with a lot of different environmental campaigns around climate change, and reducing waste in Dunedin, and things like that. [Alice - SE - 1.1]*

> *When I worked for United Nations then, I used to live and work with those [disabled] people. [Leanne - SE - 1.4]*

The sustainability-driven entrepreneurs who were selling organic products (2 out of 5 SE), reported that they were involved in the production side before starting their businesses. They discussed a market gap between production of organic products and their distribution in the market. As producers who were selling their products to mainstream supermarkets, they had concerns about their choices. They explained that some of these mainstream shops were under pressure from major actors and dominant trends in their business environment to stop the organic ranges of their products, which was a risk for their work as producers. For example, Robert - SE - 1.5 reported:

> *I mean for us as farmers and growers, the big challenge was how to sell our product, how to get it to the people who wanted to buy it. At first, we worked with the supermarkets, they did give us quite a good deal, but we were a bit uncomfortable about it and they came under pressure from some of the non-organic growers, so once the organic shops like this opened up, it was much better for the growers. [Robert - SE - 1.5]*

These interactions form the cultural norms and perspectives of sustainability-driven entrepreneurs about social and environmental problems and lead them to realize the power of consumers as actors who can bring about changes in dominant trends by their everyday choices. Alice - SE - 1.1 explained her situation:

> *Personally, I have been involved in Fairtrade movement before. So for me, it is a fairly obvious connection between the power that people have as consumers and just little everyday choices and the power that businesses and systems of production have to actually influence the wider world. [Alice - SE - 1.1]*

This notion was also confirmed by the other actors in this research. A few of them (3 out of 11 OA) discussed the involvement of the sustainability-driven entrepreneurs in wider social movements and explained how different cultural norms in those groups influence the worldviews of the sustainability-driven entrepreneurs. They reported that sustainability-driven entrepreneurs are driven by values shaped through their interactions with such engagements. For example, Geoffrey - OA - 1.8 reported

> *Alice as an individual was involved with Fairtrade so she is more strongly imbued with the values of it. [Geoffrey - OA - 1.8]*

The life experiences of sustainability-driven entrepreneurs led them to identify gaps in related markets and form their viewpoints and values towards social and environmental problems. Subsequently, sustainability-driven entrepreneurs aim to address those gaps and pursue their objectives by starting their new practices while there were no similar examples around them. They set strong non-financial goals for their businesses and intend to use their businesses as a means to achieve those wider social and environmental objectives, as discussed in the following theme.

5.3.1.2 Business as a Means to an End

The majority of the sustainability-driven entrepreneurs (3 out of 5 SE - 1.8 Codes), reported that they consider their businesses as a means to address their broader social and environmental intentions. Coming across their business ideas by having a life experience in other social movements or at producers' level takes the social and environmental goals to the core of their businesses and turns them to the bottom lines. For example, Michael - SE - 1.3 discussed how he came across his business idea participating in a conference about social justice:

> *I was at a conference talking about social justice issues and they are talking about Fairtrade, and I made a comment: I got my Fairtrade coffee, do my bit, and she (presenter) looked at me and she said what about your clothes… I would have thought alright! I got to buy some ethically-made clothes, and could not actually find any! I inherited the money from my parents at the time and I thought that is a good way to kind of do something, getting some products here. That is kind of how I started. [Michael - SE - 1.3]*

Likewise, the sustainability-driven entrepreneurs discussed their intention to expand the availability of organic and ethical products for wider consumers as their main objective. Clare and Peter - SE - 1.2 explained:

> *We had a vision about taking organic food to a wider range of people and the local community. [Clare and Peter - SE - 1.2]*

Most of the sustainability-driven entrepreneurs (3 out of 5 SE) discussed using their personal financial resources to fund their businesses. With a similar story to Michael - SE - 1.3's, Alice - SE - 1.1 reported how she and her business partner invested the money they could earn from the craft industry in their new business to pursue their goals and get involved in what they were really passionate about.

> *Once the craft business started to pick up, [our] first thought was how we can invest this back towards what our broader passion is. [Alice - SE - 1.1]*

Furthermore, the sustainability-driven entrepreneurs, especially in Fairtrade shops, discussed their strong emotional attachments to their broader objectives. They reported that they were willing to sacrifice their business for their social and environmental goals. Considering their businesses as a means to achieve those objectives, if they can address those non-financial intentions by sacrificing their businesses, they have gained what they had aimed for. Alice - SE - 1.1 and Michael - SE - 1.3 discussed their passions as follow:

> *If we really change consumer mindset that much and other businesses all sort of change to compensate, then we would no longer have the niche… but given that you know our businesses is a means to an end, if that happened and every shop down the street had products that were produced in an eco-friendly, people-friendly way, I would be comfortable with that. I would close the door and be happy. [Alice - SE - 1.1]*

> *For me, I am more about making the concept of Fairtrade popular than trying to run a profitable business, which is, just so far have not run a profitable business. One day we might make a profit, we are not there yet, so for me, it is about raising awareness in NZ as a tool for that. [Michael - SE - 1.3]*

Some of the other actors (6 out of 11 OA– 11 Codes) also described sustainability-driven entrepreneurs as passionate advocates of their social and environmental goals. They reported that entrepreneurs that are considered as pioneers in their local settings are people who really believe in what they are doing and they are keen to take the risk and introduce their new practices, while there is no similar model in their business environment. This emotional attachment and passion for addressing social and environmental problems encouraged them to persist in their goals and form strong identities within their businesses. Edward - OA – 1.6 reported:

> *In terms of pioneering, the kind of cutting edge, I suppose, of ethical initiatives and things like that, it is about small businesses and the individuals that are really passionate about these issues, and you know, they are keen to get out there and pioneer it. [Edward - OA – 1.6]*

These social and environmental values become inseparable parts of their businesses and result in a different range of criteria for evaluation. Their definition of success is not necessarily defined by financial performance and the assessment criteria are quite different from conventional forms. Clare and Peter - SE - 1.2 explained:

> *It is not like we are a business and we decide to go sustainable, it is not like we are making motorbikes and we are going to make sustainable motorbikes. It is about organic production of food, so it is the core of what we are about, so everything else just falls out from it like it is sort of non-debatable. [Clare and Peter - SE - 1.2]*

Sustainability-driven entrepreneurs discussed their evaluation criteria based on how successfully they have transferred their stories and philosophies to their audiences. For example, Michael - SE - 1.3 explained how feedback from the people who had listened to his talks, reporting the changes in their purchasing habits, were satisfying for him and gave him an impression of success.

> *Yes, it is just a gut feeling and you know, I am terrible at recording stuff, I am terrible at writing stuff down, and so yeah it is really just gut feel, or I guess it is the story; so what would excite me is if someone comes, if I can email through, after an event and someone emails me and says: hi, I heard your talking and because of that I have gone back and I have got my church to start using Fairtrade products then I know I am successful. [Michael - SE - 1.3]*

Having concerns about social and environmental issues through their life experiences, sustainability-driven entrepreneurs aim to address those gaps by forming their new businesses. They show strong emotional attachments to their non-financial objectives to

the point that some of them are willing to sacrifice their businesses to achieve those goals. Other actors describe them as passionate individuals who are willing to take risks and may work with lower financial performances to pursue their objectives. They use different criteria other than financial performance to evaluate their actions and find self-satisfactions by achieving those goals. However, some of the sustainability-driven entrepreneurs discussed their lack of business experience as shown in the following section.

5.3.1.3 Lack of Business Experience

Three of the sustainability-driven entrepreneurs (3 out of 5 SE) discussed lack of business experience when they started their businesses. As mentioned earlier, they came across their ideas by their life experience in other activities such as their engagements in Fairtrade movements or working as producers in organic farming. Some of them explained that they are not identified as business-qualified among other actors and they are learning on the go:

> *We [two business partners in the shop] have been involved in business only as much as you are as a crafter so we worked in jewelry together for about a year and a half prior to that…. On the business scale, people have an expectation that we know what we are doing; if you are running a business you must be business-qualified or just that you follow all these systems and norms of how businesses are done. We just came at it and really in a bottom up kind of perspective just learning as we went building it up doing things in a very gung ho kind of manner. [Alice - SE - 1.1]*

> *The clothing industry is a bit of a beast and I started not knowing anything and so I have learned quite a bit. [Michael - SE - 1.3]*

This lack of experience may influence their success by imposing a higher risk in their learning process. Two of the other actors, presenting Fairtrade cooperatives, reported that businesses that are familiar with marketing strategies are more productive and may have better performance outcomes. Their marketing skills help them present their work more productively and have better sales outputs, which consequently have positive effects on cooperative performances. Previous work experience also helps sustainability-driven entrepreneurs to be more sensitive to feedback from their surrounding environment and enhance their learning abilities. For example, Sonia - OA – 1.11 reported:

> *Marketing and selling is a skill that these shops need to have. Businesses equipped with better marketing skills and human resources are able to sell better and it positively influences our business. [Sonia - OA – 1.11]*

The findings in this study suggests that lack of business experience among some of the sustainability-driven entrepreneurs influence their performance criteria and change the perception of other people in their business environment towards their activities. While this lack of experience may enable them to be open to innovative ideas and thinking out of the norms in their sector, they may lose their connections with dominant trends and loose access to scarce resources that may influence the viability of their businesses in longer terms.

5.3.1.4 Summary

This section explained how life experiences in social movements or working as organic producers helped sustainability-driven entrepreneurs to identify gaps and shape their worldviews about current social and environmental problems. This experience and being in contact with such networks, form their intentions to start their businesses with assumptions that are not aligned with institutional norms in their sector. These sustainability-driven entrepreneurs consider their businesses as a means to achieve their social and environmental goals, which brings those objectives to the core of their business and result in different performance criteria. They define different dimensions for evaluation of their businesses other than financial gains. Achieving those objectives would bring them a sense of success and self-satisfaction, which may eventually encourage them to persist in their goals. Yet, their lack of business experience may hamper their marketing performance and lower the rate of success. While their strong commitments to social and environmental goals help them to develop a strong identity for their businesses, the norms and institutions in the retail sector and among consumers are not aligned with their new practices. Therefore, they have to employ different strategies to introduce and justify their actions and form a robust niche, which may help them to attract the attention of other actors and gain more resources. These roles and strategies are discussed in the following section.

5.3.2 Main Roles and Strategies for Forming a Robust Niche

As discussed in the previous section, sustainability-driven entrepreneurs are motivated enough to risk and pursue their goals through their business activities by introducing new

ranges of products in the market. In order to survive and find legitimacy among consumers and other stakeholders, they need to interact with other actors, to legitimize their actions, and form their niche. The findings in this case study demonstrate that sustainability-driven entrepreneurs in the retail sector play different roles to achieve these, which are presented in two main categories of (1) learning; and (2) networking; informed from Sustainability Transition literature, as presented in the following sections.

5.3.2.1 Roles and Strategies for Learning

This section explains how the sustainability-driven entrepreneurs in this case study, learn and develop a convincing model of their new practices to find cognitive legitimacy and build the knowledge for their new niche. The findings are presented in two main themes (1) justifying a legitimate business model, and (2) balancing social and environmental goals; as discussed in the following sections.

5.3.2.1.1 Justifying a Legitimate Business Model

Similar to conventional entrepreneurs, the sustainability-driven entrepreneurs, when introducing new products to the market or developing new procedures in their businesses, have no similar practicing model in their business environment; hence they cannot imitate from others or take advantage of previously-developed legitimacy for their products. Most of the sustainability-driven entrepreneurs (4 out of 5 SE - 1.10 Codes) discussed this notion and explained how the sustainability-driven entrepreneurs had to learn and revise their work with trial and error to develop convincing practices. For example, Alice - SE - 1.1 reported:

> *We had to learn on the go… we just decided to go through on expertise of friends and a lot of people… didn't realize how different our business model would be, just very unconventional. [Alice - SE - 1.1]*

Clare and Peter - SE - 1.2 complained about the lack of educational resources; in their opinion most of the educational material was not aligned with the intentions in their businesses, hence they were not useful for them:

> *We constantly try to figure out what our business model is, because we are not quite sure. There is no model for teaching you how to do business this way. So we're sort of thinking as we go and we are conscious of that, really conscious of that. Because there is no mentor; all the resources that we have as a business owner can't help you with the issues that we had because they just say you are doing business wrong [and] that's not the way to do business. [Clare and Peter - SE - 1.2]*

The findings in this thesis suggest that sustainability-driven entrepreneurs had to learn and develop their skills to justify their new practices, while mentoring opportunities were not aligned with their broader business objectives. The participants discussed the difficulties in this process, as finding a common ground for addressing their social and environmental goals in the retail sector was challenging. This notion is discussed in the following theme.

5.3.2.1.2 Balancing Social and Environmental Goals

Most of the sustainability-driven entrepreneurs (3 out of 5 SE - 1.7 Codes) discussed the complexity of addressing social and environmental goals in retail shops. Different definitions for green retailing and ethical consumption cause confusion for sustainability-driven entrepreneurs to balance their social and environmental goals and integrate them under the umbrella of a unique entity. They discussed that sometimes they have to compromise between their different goals based on the priorities, or focus on one aspect. For example, Alice - SE - 1.1 explained how she had developed her own definition of an ethical shop by gathering different ranges of ethical products under one roof for a diverse range of consumers. She discussed her priorities for different ranges of ethical and environmental goods in her business. Similarly, Clare and Peter - SE - 1.2, one of the organic sustainability-driven entrepreneurs, discussed their challenges in selling goods with less packaging. They reported that some of their customers prefer to buy packaged products and at some stage they had to compromise and change their strategies to market more packaged products compared to bulk, in order to achieve their underlying goal that is to make organic products available for a wider number of consumers.

> *Our vision is that we are an ethical store. We have this sort of broad categorization of being ethical. We essentially define this ourselves in a way that no other business we know has done before… under the bracket of Fairtrade we aim for themes that are actually certified by the Fairtrade system, which is something that we support strongly. Products which are New-Zealand-made, within that we have a very strong preference for eco-focus like up-cycling and recycling, reusing, natural products, and sometimes organic products. Then the third thing we do, is we have previously-loved or vintage items… In my mind it is a little bit of a hierarchy. [Alice - SE - 1.1]*

> *We are constantly debating... I think you often ask, are we selling out by choosing to do this by stocking package stuff?... It was predominantly a bulk food business, very little packaged product. Now, we look around, we have a lot more packaged products… We have gone into prepackaged food because some of our clients' demand that… We actually connect it back to the core philosophy which is to take organic food to the wider community. [Clare and Peter - SE - 1.2]*

The complexity of addressing social and environmental goals was also mentioned by other actors (5 out of 11 OA – 6 Codes) in this research. They discussed different interpretations of socially- and environmentally-friendly goods and reported that often people who want to start their own shops are confused about addressing all social and environmental dimensions under the umbrella of one business. For example, Mary - OA - 1.3, who is working in one of the Fairtrade cooperatives, explained about her prioritization and her advice to these entrepreneurs. She highlighted the support for producer groups as her first-priority objective.

> *I think it is really challenging and we actually get asked from people who are starting similar businesses, especially when you are working in the area of Fairtrade and we have these nine or ten goals of what it means to be Fairtrade, you do find people kind of splitting hairs to make sure that they are covering all of them… We really have this very specific focus of empowering these women to do what they love to do… Those social aspects of it are what our number one priority is. Sourcing the Fairtrade organic cotton that we cannot afford and our customers would not really want to pay for is not our number one priority right now. [Mary - OA – 1.3]*

The complexity of integrating social and environmental goals in sustainability retail shops may result in confusion among sustainability-driven entrepreneurs. They develop different models and prioritize their activities based on their personal philosophies. Sometimes they take the middle-ground approach to address the more important aims based on their personal preference. The subjective definition of sustainability and different priorities among consumers and the sustainability-driven entrepreneurs, make it difficult to agree on a final model for their practices and implications of these goals in practice could be quite diverse. This complexity and diversity of approaches make the whole concept difficult to find legitimacy among other actors in the business environment.

5.3.2.1.3 Summary

This section of findings explained how sustainability-driven entrepreneurs learn and develop their practices to promote their new products and legitimize their actions to form a robust niche. Sustainability-driven entrepreneurs discussed the constant learning process, while they also complained about contradictions between educational and mentoring material and what they try to achieve in their businesses. They also discussed the complexity of addressing social and environmental goals in an integrated unit. The sustainability-driven entrepreneurs had to prioritize and sometimes compromise among their different goals to address the ones with higher priorities. This creates a diversity of

approach among sustainability-driven entrepreneurs because their actions are influenced by the subjective meanings of ethically-made and environmentally-friendly goods and different worldviews of people involved in these situations. Nevertheless, they made an effort to interact with other actors in their business environment to introduce their practices and develop their networks, which is discussed in the following section.

5.3.2.2 Roles and Strategies for Networking

Sustainability-driven entrepreneurs like, entrepreneurs in general, interact with other actors in their business environment to introduce their new practices and products and develop more supportive environments to gain resources. This section of findings describes how sustainability-driven entrepreneurs in this research employ different roles and strategies to connect with different actors and achieve these goals. The findings are presented in the following themes: (1) system building and creating new networks; (2) empowering producer groups and building social capital; (3) education as a marketing tool; (4) storytelling and creating real experiences to remember; (5) transparency as a fundamental rule; (6) role-modeling; and (7) cooperating with like-minded businesses.

5.3.2.2.1 System Building and Creating New Networks

All the sustainability-driven entrepreneurs (5 out of 5 SE) discussed developing necessary platforms to bring socially- and environmentally-friendly products into the New Zealand market as one of their main roles. This argument was confirmed by almost all the participants (14 out of 15 AP – 27 Codes). They reported that while there are available producers and interested consumers, for both organic and ethical products, connections between the two parts are missing. This action would help cooperatives to focus on their main activities as wholesalers to support producers and develop their skills. For example, John - OA - 1.2 and Mary - OA – 1.3 defined sustainability-driven entrepreneurs as critical connections between producers and consumers:

> *Any retail shop is critical so there is a market to sell the products and whether that is a Trade Aid shop or supermarket or a healthy food shop or any shop that sells Fairtrade products, it is critical because [if] we can find the supply, we can make the product, but without a retailer we can't sell it… we don't sell direct, we sell through a retailer and the retailers are very important parts of the supply chain. [John - OA - 1.2]*

> *Providing the platform to taking it [product] out there, because we sell retail on our website but we cannot focus on that because we need to focus on wholesale. [Mary - OA – 1.3]*

The role of sustainability-driven entrepreneurs as connectors between producers and consumers is important, because larger retail shops and more mainstream markets are not willing to take risks introducing these new ranges of products into the market. Sustainability-driven entrepreneurs, with their personal intentions, are enthusiastic enough to risk and connect these two separate parts, despite the fact that economic and cultural norms in their business environment are not aligned with their actions. Some of the participants (5 out of 16 AP – 6 Codes) discussed this notion and explained that while some larger retail shops sell Fairtrade or organic goods at the moment, initially, entrepreneurs who are considered as pioneers had to take the risk and bring those goods to the market. They have to show to larger-scale retailers and more mainstream shops that there is a market for these products. For example, John - OA - 1.2 reported:

> *Supermarkets don't normally start with a new product… so they would prefer that health food shop or Trade Aid or someone selling a lot of them and then they know that people are interested and they put it in the supermarket. [John - OA - 1.2]*

Edward - OA – 1.6 discussed that ultimately for a wider influence and broader impact on the economy, involvement of larger-scale retailers is necessary. Their involvement brings those products into mainstream markets and makes them accessible to larger numbers of consumers:

> *Ultimately, if you want deep commitment and peak impact to producers you need those big companies to get involved, you need retailers to be selling Fairtrade products and you know they need to see that there is a commercial benefit as well. [Edward - OA – 1.6]*

Connecting socially- and environmentally-friendly producers to the market may need new networks and connections. Most of the interviewed Sustainability-driven entrepreneurs (3 out of 5 SE) use unconventional methods to get connected to suppliers. For example, Leanne - SE - 1.4, who is in contact with a network of students in New Zealand, has utilized this network in order to ship products from producers in Vietnam to New Zealand's market. These methods are used to minimize the cost while finding direct access to real socially- and environmentally-friendly suppliers. Similar to Leanne - SE - 1.4, Alice - SE - 1.1 and Clare and Peter - SE - 1.2 discussed their intentions to create direct connections with producers:

> *A lot of them are smaller Fairtrade cooperatives; where we go directly to the source. For example we have a brand called 'Global Mamas' which works in Ghana [and] ships the products straight from Ghana to us. [Alice - SE - 1.1]*

> *We have always sought out direct relationship first, so that is one less step in the chain with the supply chain, so that we try to shorten that supply chain where we can. [Clare and Peter - SE - 1.2]*

The findings in this research propose a missing connection between the producers and the consumers. Despite the fact that there are interested consumers and available organic and Fairtrade producers, they are not connected to each other. The more mainstream retail shops are not willing to take risks and introduce these new ranges of products in the marketplace. The sustainability-driven entrepreneurs start their businesses with different intentions and build the required connections. They develop their networks with producers and facilitate their access to the market, choosing the shortest path possible. This approach omits middlemen from the value chain of products and enables them to return a bigger percentage of profit to the main producers, while keeping their competitive advantage in the marketplace by reasonable prices. Their actions support such producers to expand their abilities and be able to address more of the requirements urged by the consumers, as discussed in the following theme.

5.3.2.2.2 Empowering Producer Groups and Building Social Capital

More than half of the sustainability-driven entrepreneurs (3 out of 5 SE - 7 Codes) reported that their actions help producers at the other side of the supply chain to develop their competitive advantages and advance their skills. Producers can be more innovative when they have sufficient financial resources and information, and the sustainability retail shops have an important role to provide such support. Producers develop knowledge and social capital across the supply chain, which may facilitate the actions for other users and late adopters to initiate similar practices. For example, in Alice - SE - 1.1's reported:

> *We are purchasing; that allows them to grow their business and that shows people in Ghana in general [that] this is a viable system, maybe then another woman in the next town would say that they are prospering and they obligate Fairtrade-certified as well. [Alice - SE – 1]*

This argument was supported by other participants. Some of the other actors (5 out of 11 OA – 14 Codes) reported that support of retail shops enables Fairtrade cooperatives, the ones who connect small producers together and organize them to grow, to focus on empowering producers at the other end of the supply chain. This support also helps

cooperatives to develop the necessary network and skills among producers and within their organization. For example, Sonia - OA - 11 explained how their cooperative is involved in empowering producer groups, while she highlighted that without the support of sustainability-driven entrepreneurs, this empowerment was not possible.

> *[Name of the cooperative] has worked towards developing craft communities, helping their skills and creativity to find expression, recognition, and fulfillment. [Name of the cooperative] works intensively to demonstrate and instill the Fairtrade standards of equity, transparency, capacity building, empowerment, social security, and environmental sustainability at all levels of its supply chain. [Sonia - OA – 1.11]*

The enabling support from cooperatives may take different forms, from networking to developing infrastructures and creating more sustainable working environments. For example, Oliver - OA - 1.4 reported that their cooperative helps small producers solve their problems by networking and creating a sharing environment. He helps them develop knowledge and skills around their business models by giving consultation to them. He reported:

> *Oh yeah, we give lots of support, we facilitate networking when they have a problem. We do have dinners with them and will introduce them to other artisans, especially if they have problems and they don't know how to do something. [Oliver - OA - 1.4]*

Mary - OA - 1.3 explored another dimension of these relationships. She described how their cooperative helps small producers in Ghana to change their practices towards more environmentally-friendly ones. She mentioned how they support producers to develop more reliable infrastructures to maintain their sustainability by utilizing more environmentally-friendly methods of practices. She reported:

> *Our goal is to realize the resources that they have to keep it as clean as possible… teaching the women how to keep their environments tidy … we are in the process of fund-raising to build a new facility and the goal in building that is to be, you know, as environmentally-sound as possible, as that is one of our goals. [12][Mary - OA – 1.3]*

[12] This was part of the strategy of one of the cooperatives to enhance quality of life among women producers who were making Fairtrade cloth in their personal working environments. In order, to create a healthier more sustainable lifestyle for these women

Around one third of the other actors reported (5 out of 11 OA – 8 Codes) that sustainability-driven entrepreneurs also send feedback to suppliers about the market perceptions of their products, how they can improve them, and what sorts of products are more suitable for the targeted markets. Mary - OA - 1.3 explained their interactions with retail shops and how they collectively learn and establish a constructive relationship to form a value chain and address consumers' needs. She reported that their retail partners are in constant contact with them and provide valuable information about market needs and trends, which eventually help them to improve their products to meet market requirements.

> *We are constantly learning from mistakes and from successes and from conversations with the women and with our retail partners. Certainly we know every year we have products that don't sell and so learning from our retail partners what we can do to make them better. I guess the key takeaway would be a constant conversation. [Mary - OA – 1.3]*

Oliver - OA - 1.4 added another dimension to this relationship. He explained how retail shops provide market information, which may help Fairtrade cooperatives and producers make decisions about the price of products. He discussed that this information sharing is quite unique to ethical shops, because in conventional methods shops, the aim is to maximize profit by hiding information. Since the main aim in Fairtrade networks is to develop a more tangible market and support for producer groups, they willingly share their information to help other actors across this supply chain.

> *I can call them up and say look we want to introduce a product but I need some feedback, what do you think of prices? And they tell me what they think; they could pay the most for it, they are not afraid of telling me. I get good feedback from them, that is rare usually in a business, you know… usually you do not tell your opponent of the negotiation, you don't tell them what you are willing to pay, you never do that, usually when you are negotiating there is an adverse aspect but in this case obviously we are family. [Oliver - OA - 1.4]*

The findings suggest that the sustainability-driven entrepreneurs indirectly help other entities in the supply chain, such as producers of environmentally- and socially-friendly products and Fairtrade cooperatives, to expand their network, develop knowledge, and create procedures around their new methods and products. They send feedback and share information from their markets. These efforts gradually develop the capabilities across the value chain of their products and services and create institutional support for these new organizations. On the other hand, sustainability-driven entrepreneurs have to

sell their products in the market and convince consumers to choose from their range of goods. They named education as one of their main strategies in this regard, as discussed in the following theme.

5.3.2.2.3 Education as a Marketing Tool

Some of the sustainability driven entrepreneurs (3 out of 5 AP – 9Codes) reported that changing consumers' mindsets and raising their awareness about influences that they can have by their everyday choices are an important strategy for them. They try to find wider audiences and encourage different groups of consumers to choose from socially- and environmentally-friendly products. Alice - SE - 1.1 and Michael - SE - 1.3, two of the sustainability-driven entrepreneurs in this research, were very passionate about education and they had elaborate marketing strategies around this concept. They use every opportunity within the store: by giving information through one to one conversations and outside the store, by supporting talks and educational activities, to raise their current consumers' awareness and attract prospective consumers. In their opinion, consumers and specifically the younger generations, are able to change trends, hence they spend considerable time educating these people. They reported:

> *We feel very strongly, me personally, about education! That's literally written into our mission statement, as a business, that we will be involved in not just physically hanging the products, but teaching, and informing, and educating, and being part of the campaign in the broader city context for practices such as Fairtrade, and really changing the whole consumer mindset, which, I guess, in turn tips the business environment in Dunedin towards an ethical angling. [Alice - SE - 1.1]*

> *For me education is probably the thing that I am passionate about. I am passionate about working with young people. I have been a youth worker for 20 years, so I am passionate about saying young people being able to make a change, so I think Fairtrade is a tool [with which] I can do that. [Michael - SE - 1.3]*

The sustainability-driven entrepreneurs show consumers how they can influence the life of the suppliers on the other end of the supply chain. They justify the benefits of ethical consumerism and differences between ethical consumptions and their traditional choices. For example, Michael - SE - 1.3 explained how he challenges the dominant mindsets among consumers. He discussed how their efforts encourage people to think about their choices and the origins of the products:

> *I know that we certainly challenge people about what they are buying, and how they are buying, and doesn't necessarily mean that it changed buying a product, but they started thinking about things because if it is not Fairtrade, what is it? So that is kind of encouraging to see. [Michael - SE - 1.3]*

The findings suggest that reliable and accurate information about the origins of the products and producers' life could legitimize new practices and products. It provides reasons and logic for consumers to choose from socially- and environmentally-friendly product ranges. Education and sharing information by sustainability-driven entrepreneurs about the supply chain play significant roles in this regard. Moreover, sustainability-driven entrepreneurs also discussed story-telling as one of their deliberate strategies to convince consumers and transfer their message, as explained in the following theme.

5.3.2.2.4 Storytelling and Creating Real Experiences to Remember

Some of the sustainability driven entrepreneurs (2 out of 5 SE - 1.7 Codes) discussed using stories and creating real experiences about their new practices to introduce the philosophies behind them. They reported stories behind these new practices are convincing enough to persuade other people. For example, Michael – SE – 1.3 reported:

> *I think one of our biggest problems we have is there is this golf between or this lack of connection between where our products come from and ourselves and if people understand the story behind the products they don't actually, it is not like people are nasty and they want to keep people in switch ups, simply they are not aware. So raising that awareness level, I think is critical that people need to hear the stories and have the positive stories as well have the stories of change [Michael - SE - 1.3]*

Oliver - OA - 1.4, who represents one of the Fairtrade cooperatives, explained the reasons and benefits of storytelling as:

> *Because we think that is a different way of doing business, and we think it is a powerful way of doing business, and we think we have got a good story, and that we feel that if the consumer understands the benefits that buying a product is helping the supplier or the grower then that customer is more likely to buy a product. [Oliver - OA - 1.4]*

Likewise, Rebecca - OA - 1.1, who has a background in communication studies, discussed storytelling as a strong conduit of change. However, she explained that suitable methods have to be employed to achieve the desired goals. She stresses positive stories; in her opinion successful stories of change can act as an incentive or enabler for change in other people:

> *I do think telling stories can be a really powerful change agent, I am not sure that the [sustainability-driven entrepreneur] perhaps is doing that as powerfully as it could be doing it, and the example that I would give is we walk into the shop [one of the entrepreneurs' shop] and they [sustainability-driven entrepreneur] have photos of their producers on the wall and a little story about the producer underneath and a map identifying where the producer is from and I think that is a really visual way of telling the story which engages people as soon as they walk into the shop. [Rebecca - OA - 1.1]*

Beside storytelling, Clare and Peter - SE - 1.2 deliberately started an eatery in their shop to create a real experience of organic foods. They reported that the quality of food and the unique experience of consumers in their eatery, encouraged them to learn more about organics and the philosophies behind it. This can become a conduit for information sharing and finding legitimacy among wider audiences:

> *That was another strategy, opening the eatery for the purpose of having a place to sit down and have a lunch, but we deliberately constructed a menu really just fresh and seasonal but all organics and we didn't even really loudly publicized that it is all organic, and so people come in here and they potentially sit in just an ordinary experience in a way, but the food is really good so it is nourishing, you know, it is a marketing strategy but also open the door a little bit for people who might not otherwise come in. [Clare and Peter - SE - 1.2]*

The strategic position of sustainability-driven entrepreneurs at the end of the supply chain makes their role particularly exclusive for storytelling and information sharing, as they can communicate in a very individual-based approach. It enables them to explore more deeply into philosophies based on an individuals' needs. Sustainability-driven entrepreneurs can tailor their stories based on their customers' needs and answer their questions with reliable and suitable information. John - OA - 1.2 defines this individual-based relationship as the major difference between what Fairtrade cooperatives do with what sustainability-driven entrepreneurs are doing at the end of the supply chain:

> *The retailer is normally the one who has a face to face communication with the buyer, the consumer on a basic level, I mean we talk to consumers more as masses through social media etcetera but it is not normally on an individual basis, where the retailer actually is the one who can stop and answer questions and as a live discussion with people, so they have a very important and powerful role there. [John - OA - 1.2]*

Edward - OA – 1.6 expressed the same opinion:

> *I think also in the way that small shops are also able to really kind of dig a bit deep in terms of the story that they are telling around Fairtrade, and I also do more talking about organics and what it*

> *is, you know, they are really able to come and communicate a bit more deeply about those messages. [Edward - OA – 1.6]*

The findings suggest that the sustainability-driven entrepreneurs use stories as a simple way of communication to transfer their message to their consumers. They discussed that having meaningful stories and strong philosophies behind their practices play a crucial role in making their audiences passionate about their actions. The participants also discussed the importance of transparency as a way of trust-building, as reported in the following section.

5.3.2.2.5 Transparency as a Fundamental Rule

Some of the sustainability-driven entrepreneurs (3 out of 5 EP – 3 Codes) noted transparency as one of the main principles for running their businesses. Compared to the dominant principles in the retail sector that emphasize anonymity and large-scale productions, these shops mainly highlight the individuality of the products and their traceable supply chain that can be unique to these new trends and the more socially and environmentally friendly retailers who apply principles of corporate social responsibility in their actions. The sustainability-driven entrepreneurs discussed sharing reliable information about themselves, their products, and their producers. For example, Clare and Peter - SE - 1.2 had visited some of the organic producers to collect reliable data and develop profile information about their suppliers. They underscored the reliability and integrity of information for this purpose by showing real photos and reflecting honest information in their profile:

> *We do grower profiles as Clare said and that enables our customers to relate to them as well, and we are the ones who have done it, we have not employed someone else to do it, we took the photos, we did the interviews, we put the posters together. That is another strategy; everything we do here has sort of that level of integrity to it. It is honest, like they are not Photoshoped photos; to make them look [good], you know, they are real. [Clare and Peter - SE - 1.2]*

Likewise, Alice - SE - 1.1 discussed her involvement with Trade Aid networks, their focus on transparency, and the influence they had on her practices:

> *I was really heavily involved with Trade Aid before I started here, I think for them, like, the value for Trade Aid, for example, would be transparency; to show consumers exactly where the stuff are coming from, so that's something that I incorporated here a lot. [Alice - SE - 1.1]*

Transparency enhances the level of trust and distinguishes these sustainability-driven entrepreneurs from the conventional retail shops and brands. By employing transparency principles, sustainability-driven entrepreneurs act as sources of communication, compared to traditional businesses that disconnect consumers from the resources of the products and their producers. Besides their interactions with consumers, the sustainability-driven entrepreneurs reported that they want to be identified as practical examples of their practices and act as role models for other businesses in their local settings, as discussed in the following section.

5.3.2.2.6 Role Modeling

Some of the sustainability-driven entrepreneurs (3 out of 5 SE - 1.9 Codes) reported that they want to be identified as practical examples of their beliefs in order to encourage other businesses to adopt similar practices. These sustainability-driven entrepreneurs discussed using every opportunity to introduce their work to other people in their business environment. They try to get on local newspapers, talk in events, and be visible in in the business community. They proactively look for opportunities to tell their stories and encourage other enthusiastic entrepreneurs to start the same businesses, although this may result in a situation in which they could lose their niche market. Alice - SE - 1.1 reported:

> *We wanted to be an example of the business that could run with these principles so that other businesses would say: oh well, perhaps it is financially viable. [Alice - SE - 1.1]*

> *Just purely by existing, and by being visible, I guess, when I am trying to get something in the newspaper for example, I see that is part of that and yeah, the connection with the audience is probably the other one… just being visible specifically to the business community. [Alice - SE - 1.1]*

On the other hand, some of the other actors (5 out of 11 OA – 12 Codes) discussed that developing a successful business model by the sustainability-driven entrepreneurs may demonstrate to other people an example of a business that has social and environmental values in its core while still being financially viable. Sustainability-driven entrepreneurs provide solutions for social and environmental problems and offer practical examples for those issues. For example, Rebecca - OA - 1.1 discussed about Alice - SE - 1.1's business and explained how her actions have shown other people an alternative business path that has socially- and environmentally-friendly procedures. She described Alice - SE - 1.1 as a role model in Dunedin city (local setting) which currently suffers from this matter:

> *What excites me about the work that Alice and [the business partner] are doing with [name of the business] is they are showing an example! They are showing it is possible to have a different ethical business model, and I think that's what the city suffers from. [Rebecca - OA - 1.1]*

Three of the sustainability-driven entrepreneurs (3 out 5 SE - 1.4 Codes) reported that they are willing to share their knowledge and information with interested parties. Michael - SE - 1.3 considers other people who are starting similar practices as his allies. He thinks they will help him achieve his broader social and environmental objectives, thus he shares his experience and his networks in order to support these enthusiastic people to develop their own businesses. He reported:

> *I want to support anyone doing Fairtrade! So I had a lady ring me, talked me about three months ago, who wants to start doing Fairtrade t-shirts for kids. That's great. So I just told her everything I learned in six years, and she was like 'Wow! You are helping your competitors get started', and I said 'No, you are actually helping me achieve my goal!' So I think that's something a bit different. It's kind of working with your competition. [Michael - SE - 1.3]*

Similarly, Clare and Peter - SE - 1.2 reported that their business practices have attracted some attention among people who were looking for similar business ideas. Some interested individuals were looking at their business practices and asking for advice. They discussed that they can offer assistance to these like-minded people to enable their ideas become true. They discussed:

> *It is starting to happen, we are sort of involved in discussion with young people, and good ideas are coming to us. We have sort of conversations with people looking for something. I also feel like we can bring business minds to what they are looking at. [Clare and Peter - SE - 1.2]*

However, the role of the sustainability-driven entrepreneurs as role models was challenged by some of the participants. Participants reported that so far there was not robust evidence that shows other people and businesses to consider sustainability-driven entrepreneur models as valid alternatives for their practices. Lisa - OA – 7 thinks sustainability-driven entrepreneurs do not have major impacts on other businesses, rather she reported consumers as stronger drivers for a wider change in the business environment. Similarly, Michael - SE - 1.3 who thinks he has been influential for other people to start the same kind of business in New Zealand, described his influence as very minor that has not resulted in major changes in current trends. They reported:

> *Not at the moment probably not, no! I think they operate from their own set of motivations, but I don't think they influence others … I mean I don't think we really bring about I mean if we did we would see more retail stores that they would offer Fairtrade; we might have influenced cafes having Fairtrade coffee but then they comes down to customers asking for it as supposed to us having any influence on that. [Lisa - OA – 7]*

> *There have been others who have started because of seeing what I have done, but I don't know if this necessary changed existing businesses, so when I started it was not any Fairtrade clothing in NZ at all and now there is probably three or four or five which I was definitely substantial influence, and then being able to do that, and I think it is simply because well if that guys can do it then we can do it as well. [Michael - SE - 1.3]*

The results suggest that the sustainability-driven entrepreneurs want to be identified as practical solutions for their social and environmental concerns. They discussed role modeling for other businesses. Their successful business practices may create alternative models for conventional businesses and encourage other people to adopt similar approaches. Moreover, they share their practical knowledge and networks with other interested parties to facilitate their actions in adopting similar approaches. However, it seems that the influence of entrepreneurial actions in this regard is minimal, since trends and institutions of mass production and shareholder profit maximization are highly embedded in current regimes that make the validation process for these new trends problematic. The sustainability-driven entrepreneurs also reported cooperation among like-minded businesses in their business environment, as discussed in the following section.

5.3.2.2.7 Cooperation with Like-Minded Businesses

Almost all of the sustainability -driven entrepreneurs (4 out 5 EP – 16 Codes) discussed cooperation among themselves and other like-minded people for their social and environmental goals. While this cooperation creates a collective identity for their trend, it enables them to share resources and pursue more ambitious goals. The collective nature of these actions may empower them to have wider influence on their business environment. For example, two of the sustainability-driven entrepreneurs discussed online information sharing with like-minded businesses and organizations. By using social network platforms such as Facebook[13], they have the opportunity to target particular

[13] Facebook is a social network website that is "founded in 2004, Facebook's mission is to give people the power to share and make the world more open and connected. People use Facebook to stay connected with

groups of people. These sustainability-driven entrepreneurs and like-minded actors share their information among themselves and each of them distributes the information in their network. This information sharing in social networks lowers the cost of these activities compared to other tactics. For example, Alice - SE - 1.1 reported:

> *Information sharing, I describe it as so, in that way, it achieves our goals of changing consumer behavior, because yeah, it's from the educational side of things that you share information with them and they share it back. I guess each group has their own sphere so you inject your little bit of information and they explode it out to their network and vice versa. [Alice - SE - 1.1]*

The other participants (9 out of 11 OA – 20 Codes) reported a similar pattern among green retail shops in different places. For example, Mary - OA - 1.3 reported that having broader social goals enables the Fairtrade community to gather around their communal goals and act collectively. They aim to make Fairtrade more mainstream while using their communal goals as a motive to promote cooperation. She reported:

> *I do see that, in kind of, as a common story throughout Fairtrade shops, and as well as Fairtrade businesses, I think there is a desire to share information and boost each other up. [Mary - OA – 1.3]*

Yet, the interviewed sustainability-driven entrepreneurs discussed the difficulties in this information sharing. Having personal priorities among different aspects of social and environmental goals, which was also mentioned in the learning activities, may create conflicts among the people involved in these situations, especially between groups having different priorities of environmental and social sustainability. This diversity of interest and different priorities of actors may hamper information sharing activities and reduce the level of trust among the actors involved in them. It destabilized the ties among these cooperative actors. Alice - SE - 1.1 explained her opinion:

> *I guess with information sharing, there could be a small problem in that there is sometimes; there is a slightly different angle of what people believe or what they prioritize. Like, for us, probably say the human element of it is slightly above the environmental [aspect]… sometimes these people, with a very strong environmental side, just don't think about the human side… Yes, I guess slightly different worldviews could be one of the problems in information sharing particularly. [Alice - SE - 1.1]*

friends and family, to discover what's going on in the world, and to share and express what matters to them" (Facebook, 2016).

Some of the participants (6 out of 16 AP – 12 Codes) discussed other forms of cooperation such as joint promotional and Fairtrade fortnights. While there is a potential for competition among sustainability-driven entrepreneurs and like-minded organizations in these events, they are enthusiastic to support each other and act collectively, which creates synergies among the participants towards their communal goals. The collective characteristics of these actions connect the networks of different businesses and result in a more vibrant environment.

Vibrancy and liveliness of these events can attract attention and show other people that there are available alternatives for their everyday choices that have positive social and environmental effects as well. Furthermore, collective actions are encouraging for the sustainability-driven entrepreneurs themselves. The collective nature of these activities may convey a sense of belonging for entrepreneurs and connect them to the wider social movement. For example, Michael - SE - 1.3 discussed that the geographical location and the population of the place in which he is living makes him isolated from the wider community. The collective actions create an opportunity to be part of a bigger crowd:

> *I think sometimes, particularly for me, it is really easy to be isolated, living in a small rural community with a young one kind of doing Fairtrade stuff, that is why it's encouraging for me to see others doing stuff and then I think, you know, we are all about trying to check this in our outcome... and so you can do something bigger, you get more coverage. [Michael - SE - 1.3]*

Similarly, Isaac - OA – 9 reported that these collective actions connect entrepreneurs to a collective identity that is growing:

> *I think it probably helps people to realize that they are part of something that is growing, something that it has some significance rather than feeling that it is just a little thing going on in the corner and it won't make any difference if they can see there are a lot of different organizations are working on this in different fields, I think it must encourage people to believe that actually we can make a difference. [Isaac - OA – 9]*

Alice - SE - 1.1 described these activities as informal cooperation based on goodwill and long-term relationships of individuals involved in it, which may result in deeper and stronger commitments among the member of these groups. It enhances the social capital among these people and creates a more productive environment. She discussed that this goodwill and trust forms in due time by the mutual interactions between the actors involved in these situations, and strengthens through time. She reported:

> *You rely on goodwill. I mean that's a very strong cooperation concept in terms of the public, isn't it? You're always building goodwill but it's actually the same with other businesses and networking, so I guess that relies retrospectively in just the fact that you see them at things, you checked them, you might email them occasionally, you compliment their business and say you are doing well and vice versa and so when this opportunity comes up, be kind of, call them, the favor of say, join us and then if people do, then you have your event happening. [Alice - SE - 1.1]*

On the other hand, Rebecca - OA - 1.1 emphasized the commitment of sustainability-driven entrepreneurs as a crucial driver for these cooperative actions. Sustainability-driven entrepreneurs initiate new ideas, and bring their networks. Since they are involved in these trends in their everyday lives, they bring their practical visions to the table. The cooperative nature of these events facilitates access to resources and enables entrepreneurs to pursue their communal goals. She reported:

> *I think the cooperation between Fairtrade and Cuckoo's Nest is really positive, and she brings her experience. She is inspiring for bringing this because she is living the idea and I think she is also a very practical individual so she brings practical ideas to the group. [Rebecca - OA - 1.1]*

> *I also think when you're promoting a cooperate work or idea like Fairtrade, you always better have different people doing that, so it is better for your idea as well to have a wide range of stakeholders involved… I guess because each different stakeholder brings something different to the table. [Rebecca - OA - 1.1]*

The findings suggest that cooperation among the sustainability-driven entrepreneurs and likeminded businesses and organizations forms collective actions. They share information and participate in joint promotional activities. This collective effort among different actors brings about resources, which enable them to achieve wider audiences. The participants discussed their effort during Fairtrade fortnights and explained how cooperation among organizations such as the Dunedin City Council, Fairtrade Australia and New Zealand, Trade Aid shops, and the University of Otago create a vibrant and effective environment to promote their activities and attract attention. However, they complained about some conflicts among the actors in these groups that initiate from different definitions and priorities for socially- and environmentally-friendly practices.

5.3.2.2.8 SUMMARY

This section discusses how the sustainability-driven entrepreneurs network with other actors in their business environment to legitimize their actions and find institutional embeddedness. It discusses that sustainability-driven entrepreneurs are crucial

connections between suppliers and consumers and create new platforms and networks for their new ranges of products. They support producer groups and Fairtrade cooperatives to develop their skills and competencies. Their actions provide financial support and market information for those actors and enable them to develop their competitive advantage. Moreover, these sustainability-driven entrepreneurs aim to educate their customers about the life cycles of their products and clarify the differences between their ranges of products with conventional trends. They think stories and philosophies behind their actions are strong enough to convince their consumers. They deliberately tell stories and create real experiences of their products, which act as a strong social construct for discussion to enhance their legitimacy among different actors. As one of their main principles, they aim to be as transparent as possible, which eventually increases the level of trust and forms stronger ties among these people and other actors. They become a source for communication with integrity and honesty, which creates predictable relationships with other actors. The interviewed sustainability-driven entrepreneurs want to be identified as role models for other people to employ similar practices. They share their information and networks with people who want to start similar businesses. These sustainability-driven entrepreneurs also cooperate with like-minded actors to share information and form cooperative groups. They discussed participating in joint promotional activities and Fairtrade fortnights that enable them to find wider audiences. While the sustainability-driven entrepreneurs employ different strategies to legitimize their actions, different socio-economic factors influence the wider effect of their actions as a forming niche, as discussed in the following section.

5.3.3 Key Socio-economic Factors Influencing Entrepreneurial Actions

The wider effects of the above-mentioned entrepreneurial actions depend on the degree that other actors accept and adopt their new practices in their business environment. The following socioeconomic factors influence the feedback loop experienced by other actors, and facilitate or hamper the double-loop learning process that translate forming new niches to robust structured regimes. The socio-economic factors identified in this case study can be categorized into the following themes: (1) acknowledgement from prominent organizations and institutions; (2) presence in mass media; (3) word of mouth; (4) legitimate third-party authorities; and (5) characteristics of the supply chain.

5.3.3.1 Acknowledgement from Prominent Organizations and Institutions

The findings in this thesis show that acceptance of the new philosophies among influential organizations such as city councils, universities and churches would result in wider legitimacy of new practices. Michael - SE - 1.3 discussed churches and religious groups as influential institutions in wider acceptance of such trends. He reported that choices of these influential institutions for particular practices can promote their philosophies as ethical and encourage people to follow the same pathways:

> *So our church went Fairtrade and I know because I can look and see what people are doing, that it influences people in our church. [Michael - SE - 1.3]*

This argument was supported by other actors. More than half of the other actors (7 out of 11 OA – 14 Codes) reported that involvement of educational, religious and governmental institutions brings more formality to the new philosophies and practices and enhances their acceptance among wider social groups. For example, Isaac - OA - 9 discussed the important role of universities as the critic and conscience of societies. Hence, when a university chooses to promote Fairtrade principles, it creates a wider legitimacy for the selected philosophy and the associated social trend. He reported:

> *The university by its parliamentary acts of incorporation and by its long history has made claim to be the critic and conscience of society. Now if it is going to be the critic and conscience of the society, it has to be behaving in moral ways and one way of doing that is by participating in Fairtrade, in trade relationships that are good for all the parties, not just for powerful players. [Isaac - OA – 9]*

As such, when the University of Otago in Dunedin chose to be a certified Fairtrade university, it encouraged other social groups to become familiar with the concept and legitimated it as a moral and appropriate choice. On the other hand, acknowledgement from organizations such as the Dunedin City Council may institutionalize the voluntary actions of groups, such as Fairtrade and make it more legitimate among other institutions and business communities. It also brings about conditions for further cooperation and facilitates the access to resources available for those organizations. Hence, when the Dunedin City Council became Fairtrade-certified, the Fairtrade committee in this city, which had existed before, found more formality, its constitution revisited, and the Dunedin City Council was offered a representative on this committee. This notion facilitates the interactions between two groups and creates a stronger bond between them. For example, Rebecca - OA - 1.1 reported:

> *I guess the city is able to add a layer of formality to some of those processes. [Rebecca - OA - 1.1]*

Yet, three of the participants discussed the risks associated with the involvement of such institutions. They reported that if these acknowledgements do not lead to real commitments of those organizations, this might decrease the level of trust and leave them out of the mainstream actions of these institutions. It changes the perception among other actors and translates them as ineffective actions used by some organizations for marketing and reputation building. For example, Michael - SE - 1.3 explained:

> *I have frustration with organizations that will claim to be ethical but then don't necessarily carry up… that is probably the biggest frustration I had with organizations. Those who claimed and promoted ethical trading but don't necessarily do it themselves. [Michael - SE - 1.3]*

The findings suggest that the commitment of educational, religious, and governmental institutions to the new philosophies may add to the credibility of them. It legitimizes new practices among different societal groups and brings a level of formality for their actions. Yet, uncertainty about the real commitments of these institutions can change the influence of their actions. If they do not thoroughly stick to their arguments, it may cut the level of trust and leave them out of the mainstream actions of those organizations. Besides the support from these institutions, the participants discussed the influence of mass media, as reported in the following theme.

5.3.3.2 Presence in Mass Media

The presence of new philosophies in mass media raises the awareness of people and acceptance of the new methods among public opinions and other businesses. For example, Alice reported:

> *That [advertisement supported by Fairtrade Australia New Zealand] kind of gives us a platform, and they do lots of advertising and promotion of that nationally, that we can kind of connect our name on to something that's bigger and more recognized and just getting more general publicity as well. [Alice - SE - 1.1]*

Some of the other participants (4 out of 11 OA – 5 Codes) confirmed this perspective and explained how promotion of new practices in the news and media, or acknowledgements from famous people, might change the trends in their favor. For example, Oliver - OA - 1.4 described how association of a well-known person and their purchasing habit, to a concept such as Fairtrade in public media, influences the recognition of the concept among wider audiences:

> *You know, participation of the media is a huge help with this; I mean when you have someone famous or respected connecting their viewpoints with their purchases, that changes the game. [Oliver - OA - 1.4]*

On the other hand, Edward - OA - 1.6 reported that while it is easy for the concept of Fairtrade to become part of the mass media programs, because it addresses salient issues and many people might be interested in the concept, it is vital to maintain connections with new approaches. This constant interaction through mass media transfers the new trends to the everyday life of audiences and embeds them in their daily choices:

> *The media are interested and you know it is a very salient topic and people are very keen to talk about it and spread the word… I think once the media is kind of covering the story, it becomes old news, you know, sometimes you find them uninterested to coming revisit them, but I think it can be trying to find new ways to talk about the issues or raise the awareness. [Edward - OA – 1.6]*

The findings suggest that promoting new philosophies and new practices through mass media can make these new concepts popular among wider audiences and reminds them of embedding such activities in everyday choices. Moreover, association of these philosophies with the behavior of famous people promotes the concept among consumers and encourages them to adopt similar practices. Besides news and mass media in small-scale cities such as Dunedin word of mouth can play a significant role in promotion of the new trends, because of the level of trust among people, as discussed in the following theme.

5.3.3.3 WORD OF MOUTH

The interviewed sustainability-driven entrepreneurs tell their stories, justify their actions among their consumers, and persuade consumers to promote the new philosophies through word of mouth. Almost half of the sustainability-driven entrepreneurs (3 out of 5 SE - 1.10 Codes) discussed the importance of word of mouth in cities of similar scale to the city of Dunedin. People and organizations that become enthusiastic about a concept can be encouraging for other people to consider the same, choices through word of mouth. Clare and Peter - SE - 1.2 reported:

> *Word of mouth in Dunedin is really big. Dunedin is the optimum size for that sort of thing, I think. [Clare and Peter - SE - 1.2]*

Other actors (4 out of 11 OA – 4 Codes) expressed the same opinion. For example, Lisa - OA - 7 reported that word of mouth has a huge influence on consumers' behavior; she

explained that in Dunedin, people heavily rely on other people's and friends' opinions. This may initiate from stronger social ties among people in such cities that enhance the level of trust and convince them to count on other people decisions. She discussed:

> *Huge! Because it is such a small place, for example you have someone who said I want to go and get some good Christmas gifts, where would I go? You say go to [Fairtrade retailer], yeah so it is huge. [Lisa - OA – 7]*

Word of mouth also helps these sustainability-driven entrepreneurs to develop their network and connect them to interested people in their business environment. People spread the word about the actions of sustainability-driven entrepreneurs and interested parties can get in touch with these entrepreneurs through their mutual connection. Michael - SE - 1.3 explained:

> *I get a lot out of my business network because someone talks to someone who has talked to someone, or I have talked to someone, and I have said oh you should talk to so and so, and I get emails from people emailing me you should talk to so and so! So then you ring them up having a yarn. So that is people, you have got people passionate about seeing Fairtrade out there if so they want to meet and talk to the right people. [Michael - SE - 1.3]*

The findings suggest that word of mouth and suggestions from people with strong social ties in cities of the scale of Dunedin can influence the wider acceptance of new practices. While sustainability-driven entrepreneurs share information and educate their customers to bend their behavior towards ethical consumerism, persuaded consumers become advocates of those trends and they could promote those philosophies among their networks. This notion in places such as Dunedin, with small-scale populations, would find a bigger influence because people usually have stronger social ties. Moreover, this trend connects the sustainability-driven entrepreneurs with interested parties through their mutual connections and expands their networks. However, the level of trust might be influenced by the legitimacy of third-party authorities and their consistency, as discussed in the following theme.

5.3.3.4 Legitimate Third-party Authorities

Fairtrade and organic certifications help sustainability-driven entrepreneurs to identify legitimate producers in different locations. Moreover, legitimate certification assures consumers that products are real Fairtrade or are organic goods that pass minimum levels of standard. Two of the sustainability-driven entrepreneurs (2 out of 5 SE - 1.5 Codes)

discussed the importance of third-party certification and how they may help protect genuine practices from green washing[14]. For example, Clare and Peter - SE - 1.2 reported:

> *First and foremost, we are after certified organic food, so there is third-party verification… there are a few people that we deal with that they are not certified, for different reasons we stayed with those people as long as they stay with the process of how they produce the food as in following the organic lines in that most of those people now have either stopped or become certified; yes first and foremost, certified organic food. [Clare and Peter - SE - 1.2]*

This argument was supported by other actors (7 out of 11 OA – 12 Codes) and they discussed the risks from green washing and importance of third party certification to protect honest practices from fake claims. Oliver - OA - 1.4 reported

> *I think there is a lot of Fairtrade washing and green washing if you know what I am saying and that is just because there is so much money made based on lies than there is based on truth. [Oliver - OA - 1.4]*

On the other hand, buying and supporting certified products would encourage other producers to adopt such certifications, which may eventually result in wider popularity for Fairtrade and organic certification. However, three of the participants discussed the diversity of certification in Fairtrade products, as discussed in the first section of this chapter. This diversity may become confusing for consumers while it lowers the cooperation among different associated groups. John - OA - 1.2 explained:

> *There is some tension and politics around that which is unfortunate because it means that different groups rather than one big group and it has been going for a while. [John - OA - 1.2]*

Edward - OA – 1.6 reported that this diversity adds to the complexities of market and brings another layer of information that makes the whole concept difficult to grasp.

> *I think from a consumer perspective, when there are multiple certifications in the market, it does get confusing for consumers because it is extra levels of information that they need to go and find out to be assured of what that product is about. I think when you have lots of certifications, it makes that complicated for consumers. [Edward - OA – 1.6]*

In a nutshell, third-party certification enhance the level of trust among consumers and other actor groups in the business environment. They develop standard procedures and

[14] Green washing has been defined as 'discrepancy between green talk and green walk' (Walker & Wan, 2012, p. 227)

assure certain characteristics for new products in the marketplace, which eventually protect new practices from green washing and Fairtrade washing. However, the diversity of certification may categorize the people involved in those practices into different groups and lower the level of influence they could find with their collective actions. Moreover, it adds to the current complexities in the market about socially- and environmentally-friendly products. Consumers may get confused by different certifications and trademarks in the marketplace. Nevertheless, the availability of products with the new philosophies is highly dependent on the characteristics and the complexity of production cycles across the supply chain, as reported in the following theme.

5.3.3.5 Characteristics of Ethical and Organic Supply Chains

The majority of the sustainability-driven entrepreneurs (4 out of 5 SE - 1.6 Codes) discussed the complexities across the supply chain such as dependency on different raw materials and miscommunication between the retail shops and producers, which may result in lack of variety, quality, and availability of such products in the marketplace. For example, Clare and Peter - SE - 1.2 complained about the decreasing number of small-scale organic farmers. They discussed the challenging processes for organic production and explained that the quality and financial benefit from small-scale production may not meet the necessary standards of the market. They noted that one of the characteristics of the developing markets for organic products is inconsistency of supply, which hinders marketing. They reported:

> *One consistency in organics is the inconsistent supply product so you get on to some good products that companies making or whatever and people will pick up on it, is a good product and well-priced, and then all of a sudden it would just disappear. [Clare and Peter - SE - 1.2]*

These arguments are supported by some of the other actors (6 out of 11 OA – 11 Codes). They discussed that these inconsistencies and dependencies add to the complexities of the market for consumers, since they have to find suitable products to substitute for their previous choices that had fitted well with their tastes. Geoffrey - OA - 1.8 categorizes some of the problems as:

> *There are obviously a range of limitations those businesses face: one is product diversity; two, regularity of supplying quality; three, trying to match product availability with consumer taste and that can often be a challenge if a Fairtrade product does not taste the same, look the same, that the consumer is used to and that is the difficulty. [Geoffrey - OA - 1.8]*

Complexities of the supply chain for some of the products may add to the difficulties. Products with a simpler supply chain such as raw material and commodities are easier to produce and get certified by third-party certifiers. Edward - OA – 1.6 reported that the focus of the Fairtrade organization is more on commodity products, as ingredients are available in larger volumes and they have shorter supply chains. However, products such as Fairtrade cotton are challenging, as more complexity is associated with their production. Moreover, everyday usage of the commodity products compared to less frequent needs for other types gives them advantage for development at early stages of the new markets. The availability of commodities facilitates the transition for other goods that have complicated supply chains and use the commodities as ingredients. He reported:

> *What we do is really about commodity products and making that available and mainstream. [Edward - OA – 1.6]*

Half of the participants (8 out of 16 AP – 16 Codes) explored another dimension of these complexities. They discussed difficulties associated with communications across the supply chain. As the procedures and standards are not established in the life cycle of these new products, different interpretations from actors across the supply chain are relevant, which causes problems in the final delivery of the products. Differences in cultural norms and perceptions of quality between producers and consumers of these products result in conflicts and misunderstandings between both sides of these communications. For example, Mary - OA - 1.3 describes how different values, such as quality of the product and color, among producers and consumers cause difficulties along the supply chain:

> *I guess having different value sets as far as what is good quality, what a customer in the West would buy, even just different statics of what colors we like versus you know what a Ghanaian woman might wear and an American woman might wear, that is always a challenge. [Mary - OA – 1.3]*

Moreover, sometimes interpretations of a message between producers and the sustainability-driven entrepreneurs could be quite different between receivers and senders. Michael - SE - 1.3 reported:

> *I deal with the factory say this is what I want, you know, specify and then they supply most of the time what I asked for; sometimes not quite exactly what I asked for, but we are getting better at that and that is about me understanding what I need to tell them as well, and you always have*

> *language and cultural things that you know, I say one thing and it is interpreted as another. [Michael - SE - 1.3]*

The findings suggest that complexities across the supply chain of products may destabilize the trend for these new practices. The availability and quality of new products influence the decision of consumers to choose from new product ranges or not. Moreover, the differences between cultures and perception of quality for consumers and producers of these products, may influence the wider acceptance of such goods and hinder the wider adoption of them.

5.3.3.6 SUMMARY

This section discussed socio-economic factors that influence the wider adoption of new practices. It shows that acknowledgements of influential organizations such as churches, city councils, and universities may legitimize new philosophies and encourage people associated with such organizations to adopt similar practices. Likewise, the presence of the concept in mass media and association of well-known individuals with the new philosophies could turn the public opinion to their favor. Furthermore, legitimate third-party authorities help consumers to choose from approved products and promote the popularity of the trademark among consumers, which consequently encourages producers to move towards those certifications. However, the diversity of these certifications may cause confusion among consumers and influence the effectiveness of collective actions as it breaks the interested population into smaller groups. The developing nature of the supply chain for these new product ranges with new philosophies may generate difficulties. Many of the products do not have enough diversity and do not meet the market expectations in terms of quality and taste. Products with shorter supply chains, such as raw material and commodities, are easier to get certified, hence they are available in larger volumes. Furthermore, the availability of these raw materials may facilitate the transition of more complex supply chains in the future. As standards and procedures are not fully developed across the supply chain of these new ranges of product, language and cultural barriers between producers and retail shops may result in different interpretations and cause unexpected outcomes. This developing nature of the market causes instability in the supply of products and brings complications into marketing activities.

5.3.4 The Actor Groups in Sustainability-Driven Entrepreneurship Processes

The participants discussed other actors in their business environment. Considering the above-mentioned themes, they reported about individuals and organizations that help them achieve their goals. Table 5-9 shows the actors that were identified as influential in the roles and strategies that the sustainability-driven entrepreneurs have in their business environment. This table connects the actors to their associated roles in an abstract format. This presentation might be influenced by entrepreneurial perspective as the process for data collection started with these actors.

Table 5-9 Networks of the sustainability-driven entrepreneurs in this case study

Actor	Categories	Role/Related to a resource/Influence	Themes*
Customers	Customers	• Purchasing the products • Encouraging other people with word of mouth	5
Organic procures	Producer groups	• Supply of products • May have different sociocultural norms that influence their outputs	3
Fairtrade producers			
Local producers			
Fairtrade cooperatives	Distributors	• Empowering supplier groups • Networking and knowledge sharing	3
Fairtrade Australia New Zealand	Third party authorities	• Facilitate the networking process • Promoting the Fairtrade concept in broader context • Certify Fairtrade producers	2
Third party authorities			
Dunedin City Council	NGO's, Religious and governmental organizations	• Enhancing the wider acceptance among different societal groups • Bringing about more resources	2
University of Otago			
Churches			
Like-minded businesses	Business actors	• Cooperation in activities such as Fairtrade fortnight and information sharing • Wider influence in business environment	1
Trade Aid			
Big retail shops			

* The number of themes within which entrepreneurs referred to these actors

This table summarizes the previously mentioned discussions focusing on individuals and organizations that were involved in those themes. It shows how different types of groups were involved in entrepreneurial actions and how some of them influence the wider effects of those entrepreneurial actions. As can be concluded from the table, many interactions are related to consumer and producer groups compared to other organizations. This emphasizes the stronger ties that sustainability-driven entrepreneurs have with these actors, which shows the focus and importance of those organizations on entrepreneurial actions.

5.4 Conclusion

This chapter investigated sustainability-driven entrepreneurs in the retail sector, focusing on ethical and Organic shops. The chapter started with an overview of the retail sector and its characteristics in New Zealand. It discussed the main social and environmental problems initiated from the current regimes in this sector, and showed how different actors have taken actions to address these issues. The chapter examined the life experience of the sustainability-driven entrepreneurs and explained how these experiences form the intentions of the sustainability-driven entrepreneurs to start their businesses to address their social and environmental goals. The chapter reported on the strategies that are used by these actors to learn and justify their new practices and how they interact with other actors in their business environment in order to legitimize their actions and find wider audiences. The chapter ended by discussing the socio-economic factors that influence the wider acceptance of their practices and reported the influential actors in the above-mentioned themes. This section summarizes the discussions in this chapter and conceptualizes it by using the framework introduced in Chapter Three of this thesis.

It was discussed that the retail sector is very dynamic and diverse, which results in high levels of complexities. The sector is influenced by large corporate cultures that encourage consumerism. These prominent players have a great influence on this sector with their decisions and strategies. The dominant norms for profit maximization and evaluation criteria, based on economic aspects, create strong institutional logic towards these trends. It was also shown that the retail sector in New Zealand is a small market and the isolated

geographical location of this country may make the logistics difficult and expensive. These factors show the landscape and regime characteristics for this sector as summarized in Table 5-10.

Table 5-10 Landscape characteristics of the retail sector

Characteristics	Consequences
One of the most dynamic and diverse sectors	Higher level of complexity Unstable ties between different actors
Strong economical norms based on profit maximization and cheaper price and powerful corporate encouraging consumerism	Disqualify most of the activities departing from economic norms
Small market and isolated geographical location of New Zealand	Difficult logistics for small-scale shops Higher end price for products

It was shown that the dominant trend in the retail sector has caused different social and environmental degradations that have attracted attention from different stakeholder groups. Environmental problems along the supply chain such as packaging and distribution, and low quality of life for producers of the products, are among the externalities for current regimes in the retail sector. Working based on mass production and anonymity disconnects the consumers from real producers of the products on the other side of the supply chain, and often consumers are not aware of the social and environmental consequences of their decisions. In response to these problems, stakeholders have taken different strategies to overcome them. Socially- and environmentally-friendly practices of some of the mainstream retail shops are among those activities. Moreover, some proactive entrepreneurs have started different practices in support of environmentally- and socially-friendly produced products. These notions are summarized in Table 5-11.

Table 5-11 Externalities of dominant regimes and different strategies employed by stakeholders to address them

Dominant Regimes	Externalities	Approaches employed to address
Based on anonymity and large scale production and disconnection between suppliers and consumers	• Environmental degradation across the supply chain • Deep social issues among the producers such low quality of life and dangerous work places	Incremental improvements by large scale retail shops
		Proactive entrepreneurs employing socially- and environmentally-friendly practices such as • Fairtrade shops • Organic shops • Local markets

This research is focused on entrepreneurial activities in this sector, which introduce new ranges of socially- and environmentally-friendly products into the market. It investigated some of the Fairtrade and Organic shops in New Zealand market. The chapter discussed the life experience of sustainability-driven entrepreneurs. It was shown that these people are involved in broader social and environmental movements or work, as suppliers of organic products, before starting their businesses. These connections shaped their perspectives and worldviews towards social and environmental issues and formed their intentions to depart from current norms in their business environment and start their new practices to address those concerns. It was shown that the sustainability-driven entrepreneurs use their businesses as a means to achieve their wider social and environmental goals. Hence they have different criteria for evaluation and they may work with lower financial performance in order to achieve those goals. These concerns convince them to take the risks and start their new practices while there is no similar example around them. These notions are summarized in Table 5-12.

Table 5-12 Backgrounds and intentions of entrepreneurs

Theme	Consequences
Having strong ties with broader social and environmental movements or being involved in production side	• Awareness about social and environmental issues in their sector • Finding the gap in the market in order to address their concerns • Form their intentions to depart from the current norms in their sector • Having strong non-financial goals and considering their businesses as tools to achieve their wider social and environmental goals
Addressing their concerns through their businesses	

Moreover, it was discussed that the sustainability-driven entrepreneurs do not have business background. This may disqualify them among other actors for business activities and may influence their outcomes in marketing strategies. They learn and develop their business model through time. However, it was shown that the complexity of green retailing and balancing social and environmental goals in their businesses are quite challenging. It was discussed that they have to prioritize based on personal preferences and worldviews, which may consequently result in different practice models. This diversity

may initiate confusion among actors in this sector, and consumers, and make it difficult to find a common ground and achieve legitimacy among wider audiences.

These sustainability-driven entrepreneurs have to deal with the liability of newness in their market. They employ different strategies and play a variety of roles to reduce the risk of newness and legitimize their actions in their business environment. They use different strategies to justify their actions and convince consumers by using deliberate strategies to educate consumers and give information about the lifecycle of the products. They use storytelling and create real experiences as platforms for communication. This may eventually change the cognitive norms in their sector towards the ones that are more aligned with their broader social and environmental goals. Moreover, it was shown that integrity and transparency are the main principles that may eventually increase the level of trust and create stronger ties between them and other stakeholders.

They actively support actors in their network to develop their skills and competencies and find competitive advantage. They share information from the market with suppliers and send feedback about their products, which may consequently result in more acceptable ranges of products among consumers. Furthermore, they want to be identified as practical examples of their practices for other people in their sector to start the same businesses. They consider these people as their allies, because they help them to achieve their wider social and environmental goals through their actions. They also share information with these early adopters and help them develop their businesses. They discussed cooperating with like-minded organizations and businesses to form cooperative groups and information sharing. These collective efforts may bring the opportunity to expand their network to wider audiences and find broader influence. Nevertheless, similar to the problem of the business models, different priorities among the actors in their sector sometimes hinder these cooperative activities and may create conflict among the parties involved in them. These notions are summarized in Table 5-13.

Table 5-13 Different roles and strategies employed by sustainability-driven entrepreneurs

Process for creating a niche	Roles and strategies for sustainability-driven entrepreneurs	Consequences
Learning	• Lack of experience, and learning as they go	• Learning and creating convincing models of their practices • Lower marketing performance
	• Justifying a legitimate business model and balance social and environmental goals	• Hamper the legitimacy of their practices • Diverse range of practices based on personal philosophies and worldviews
Networking	• Connecting producers and consumers	• Building systems and creating network necessary for introducing new products
	• Building and expanding the abilities and social network of the producers	• Facilitate in building system and developing its competitive advantage by sending information and financial support
	• Education as a marketing tool for marketing and finding legitimacy	• Finding legitimacy among consumers and changing the cognitive norms in their sectors • Finding legitimacy and changing the cognitive norms among consumers
	• Storytelling and creating real experiences to remember	• Building trust about their new practices and create strong ties with other actors in their sector
	• Incorporating transparency as a fundamental rule for building trust	• Roles modelling for other people in their sector and creating scepticism about current norms and trends
	• Acting as examples and role modelling for others	• Finding wider audiences to gain social legitimacy
	• Cooperating with the like-minded businesses and supporting collective actions	

Developing convincing models of new practices and sharing them with other actors in their sectors is important. The wider influence of these actions through double-loop learning between niches and regimes is influenced by different socio-economic criteria such as: participation of governmental, religious, and other influential groups; presence in mass media; word of mouth; having a legitimate third-party certification; and characteristics of supply chain, as summarized in Table 5-14.

Table 5-14 Key socio-economic criteria influencing the double-loop learning process

Socio-economic criteria	Influences
Participation of governmental, religious, and other influential groups	Giving formality and creating legitimacy among different societal groups about the new philosophies, which may change the socio-political legitimacy of new practices
Presence in mass media	Creating social legitimacy among wider audiences
Word of mouth	Spread the word among wider audiences and create social acceptance by increasing the level of trust
Having a legitimate third-party certification	Facilitate the process of legitimization by creating trust among different stakeholders
Characteristics of the supply chain	Send negative or positive feedback about the quality and variety of products

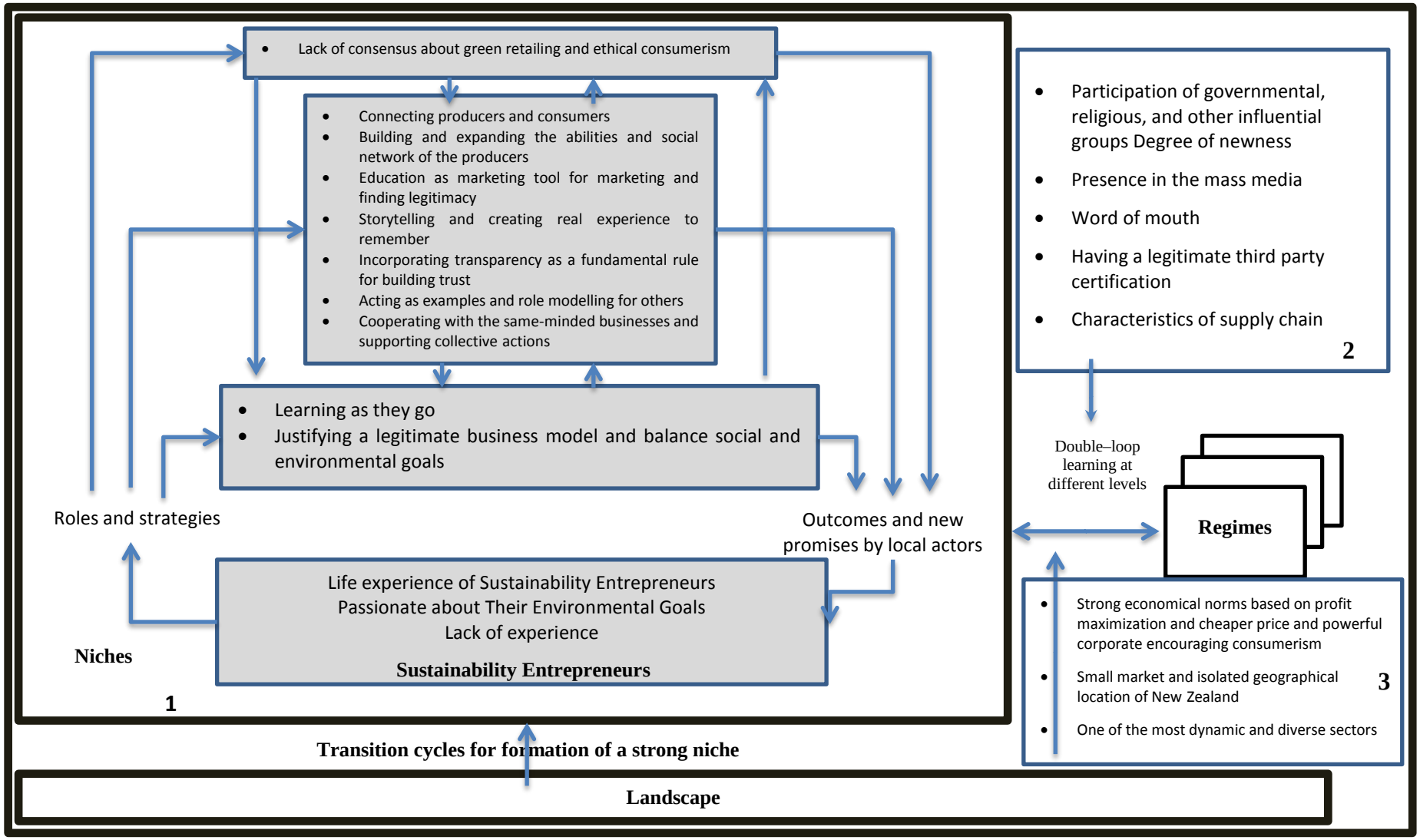
Considering the above-mentioned discussion and the model developed in Chapter Three (

Figure 3-5), these categories can be integrated into a coherent whole as presented in Figure 5-4. It shows how the sustainability-driven entrepreneurs initiate their practices by their intentions, and initial worldviews formed in their life experience, and how they employ different strategies for learning and networking to develop their own niches. Entrepreneurial strategies start at the individual and organizational level and move towards more collective actions when they find more acceptance among actors in their sector. This is shown in box one of Figure 5-4. The result of their actions may translate into dominant regimes by double-loop learning, which is influenced by different socio-economic factors, that is shown in box two of Figure 5-4. Alteration in landscape characteristics may create opportunities and threats for the relationship between the regimes and new niche that is highlighted in box three of Figure 5-4. This integrated model

could offer a better perspective to entrepreneurs about their actions in this industry and could utilized by policy-makers to make better decisions to foster transitions in the retail sector. They could change different criteria in the above-mentioned boxes to influence the cycles of complexities in these processes, which are further explored in Chapters Seven and Eight.

The next chapter investigates the sustainability-driven entrepreneurs in the wine industry of New Zealand. The sustainability-driven entrepreneurs in this case study prioritize the environmental aspects of sustainability to social dimensions compared to this case study where the sustainability-driven entrepreneurs were inclined towards social goals. This difference between the two case studies brings about the requirements for a cross-case comparison that may shed light on the differences and similarities between these two types of entrepreneurs.

Figure 5-4 Dynamic complexities of sustainability-driven entrepreneurship in the retail sector of New Zealand



Chapter 6 *CASE 2: ORGANIC, BIODYNAMIC, AND CARBONZERO WINEMAKERS IN NEW ZEALAND*

Now it is really taking up! And it is really to the credit of those original pioneers who created a model that others could follow, but I think it does take quite a lot of bravery to carve that model yourself when no one else is really encouraging you [Interviewee Sharon].

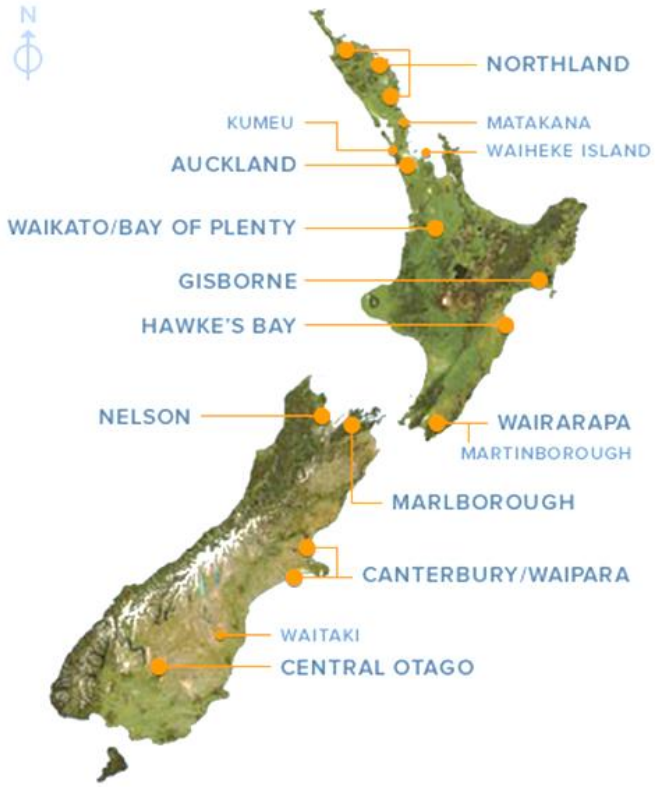
This chapter examines how organic, biodynamic, and carboNZero certified entrepreneurial companies, in the wine industry of New Zealand, are influential in creating strong niches, which eventually may scale up to change the dominant regimes in their sector. The chapter begins with an overview of the wine industry in New Zealand and explains how conventional methods of wine production have resulted in a variety of environmental problems. The chapter presents different strategies that are employed by a diverse range of stakeholders to address these environmental issues, highlighting the entrepreneurial actions among others. Then, the chapter explains how entrepreneurial companies interact with other actors in their business environment, use strategies, and play roles to develop and justify their new innovative practices. The chapter ends by discussing the network of entrepreneurs and describing the key socio-economic factors that influence the wider adoption of entrepreneurial actions. The sustainability-driven entrepreneurs in this case study prioritize environmental goals over social aspects, compared to the previous case study on the retail sector in which the entrepreneurs were more focused towards the social dimensions of sustainability. Hence, the findings from this case offer insight about entrepreneurial actions with environmental orientation and brings about the requirement for a cross-case comparison in Chapter Seven that sheds light on similarities and differences between sustainability-driven entrepreneurs with different priorities for social and environmental aspects.

6.1 Landscape Characteristics: Wine Industry in New Zealand

New Zealand is young and small in production scale compared to other wine-producing countries (Marshall, Akoorie, Hamann, & Sinha, 2010). Despite this fact, it has established a good reputation in wine production (Beverland & Lockshin, 2001; Hira & Benson-Rea, 2013) and companies in this industry are highly reliant on international markets. New Zealand's main wine export markets are Australia, the United Kingdom, the United States and Canada (Hira & Benson-Rea, 2013). Different varieties of wine are produced in this country (e.g. Pinot Noir, Pinot Gris, Sparkling, Chardonnay, Merlot), and among those, Sauvignon Blanc constitutes the main export variety to international markets. It has the highest production volume, and over the last decade, cultivation area has increased tremendously from 3,685 hectares in 2002 to 20,027 hectares in 2014. The Marlborough

region (Figure 6-1) accounts for 89% of the country's Sauvignon Blanc production (Hayward & Lewis, 2008; Hira & Benson-Rea, 2013; NZW, 2014b, 2014c).

Figure 6-1 Wine regions in New Zealand



Source: (NZW, 2014a)

The New Zealand wine industry has a regional structure (Hayward & Lewis, 2008) as shown in Figure 6-1 and 692 registered wineries and 850 growers are scattered across the 10 different regions in New Zealand (NZW, 2014a). The number of companies that produce less than 200,000 litres (Table 6-1) suggests that most of the businesses in this industry are small-scale producers. Statistics indicate that almost 55% of wine is produced by the six largest companies in this industry (Hira & Benson-Rea, 2013).

Table 6-1 Number of wineries in each category

Category (litres per year)	Number of Wineries
1 (Under 200 000)	609
2 (Between 200 000 & 4, 000, 000)	68
3 (More than 4, 000, 000)	15
Total	692

Source: retrieved from New Zealand Winegrowers (NZW, 2013)

The wine industry in New Zealand has a collaborative environment and companies in this industry cooperate for different purposes, such as marketing and information sharing (Hira & Benson-Rea, 2013). Companies in one region are in close contact with activities such as field days and other informal social events (Hayward & Lewis, 2008). This may stem from the fact that regional (geographical) status or 'terroir' is influential in wine prices and choice of consumers (Hayward & Lewis, 2008; Schamel & Anderson, 2003). Hence actors in one region put in effort and cooperate to establish and maintain a good reputation in the marketplace.

This collaborative environment varies across different regions, and reflects the number and scale of the companies in those regions (Table 6-2). It was reported by the participants in this research that smaller regions and smaller producers might have stronger informal ties, while bigger regions and larger-scale producers may have more formal and business-oriented interactions. This notion results from different organizational structures among small-scale and large-scale producers. The smaller companies are usually family-owned and developed around lifestyle intentions, compared to bigger companies that are based on mass production and profit maximization. Marlborough and Nelson, as the biggest and one of the smallest regions under research in this thesis, exemplify these characteristics. Yet, since these regions are connected with various ties, whenever necessary, actors from other regions were selected as interviewees to find a more holistic perspective to this industry.

Table 6-2 Number of wineries in different Regions

Region	Number of Wineries
Northland	13
Auckland	119
Waikato/Bay of Plenty	15
Gisborne	21
Hawkes Bay	79
Wairarapa	65
Nelson	38
Marlborough	145
Canterbury/Waipara	67
Central Otago	121
Other Areas	09
Total	692

Source: retrieved from New Zealand Winegrowers (NZW, 2013)

The wine industry in New Zealand operates under the governance of the Ministry of Primary Industry and New Zealand Winegrowers (NZW) organization, established in 2002 by a joint initiative of the New Zealand Grape Growers. The Wine Institute of New Zealand (WINZ, representative of wine companies) administers their activities. This national organization has representatives in all of the wine regions and keeps records of the national data and statistics related to wineries, grape-growers, productions, areas under cultivations, and export markets, among other things. It also organizes cooperative activities among wine producers in New Zealand and represents the industry in international markets and in promotional events around the world (Hira & Benson-Rea, 2013). Programs such as Sustainability Wine New Zealand and other research and development projects, including Vineyard Ecosystems, are run under the supervision of New Zealand Wine (NZW) organization (Hira & Benson-Rea, 2013; NZW, 2015b).

New Zealand has a reputation as a 'clean and green' country. The clean and green picture of New Zealand is used as a competitive advantage by exporters over their competitors in international markets (Flint & Golicic, 2009; Gabzdylova, Raffensperger, & Castka, 2009; Hira & Benson-Rea, 2013; Hynes, Caemmerer, Martin, & Masters, 2014; Kirkwood & Walton, 2010; Marshall et al., 2010). This was also reported by the majority of the interviewees in this research. The brand 'Pure Discovery' in New Zealand's wine industry, is one of the outcomes of this strategy (Flint & Golicic, 2009), which is used to promote this clean image in international markets and for marketing purposes. This notion might be one of the reasons that actors in this industry employ proactive and regulative strategies to protect and enhance this reputation across international markets to address environmental concerns that are discussed in the following section.

6.1.1 Regime Norms and Externalities: Key Environmental Issues for the Wine Industry

Environmental problems in the wine industry have often been overlooked. Despite the green and clean reputation of this industry, the cultivation of grapes and production of wine can be quite distant from environmentally-sound practices (Christ & Burritt, 2013). Companies in the wine industry can only be involved in one part of the supply chain such as grape growing, wine production, or distribution. However, it has been argued that a higher portion of the companies, such as companies in this research as further explored in Section6.2, are highly involved in different parts of the supply chain, from growing vines, to making wine, and the eventual distribution in the retail market (Somogyi, Gyau, Li, &

Bruwer, 2010). This integration results in close connections between resources of production, producers, and consumers. Consequently, environmental problems may become very complex with different scales and scopes (Christ & Burritt, 2013). The main environmental issues in this industry can be categorized into six groups: (1) usage of dangerous chemicals (Ruggieri et al., 2009), (2) land use issues (Overton, 2010), (3) quantity and quality of water (Gabzdylova et al., 2009), (4) Impact on ecosystems (Christ & Burritt, 2013; Galbreath, 2011), (5), organic and non-organic solid waste (Alonso, 2010), and (6) energy use and carbon emissions (Smyth & Russell, 2009).

New methods of growing grapes, and viticulture based on modern agriculture, tend to depend heavily on chemicals. These methods are quite different from traditional approaches of wine growing, which are more in harmony with ecological systems and establish organic connections between the land and the environment (Ruggieri et al., 2009). While many companies in New Zealand work based on a traditional and environmentally friendly way of agriculture, usage of chemicals such as synthetic fertilizers, pesticides, and herbicides (Christ & Burritt, 2013), by some producers has caused social and environmental problems (Carson, 1962; Dodds, Graci, Ko, & Walker, 2013; Gabzdylova et al., 2009). These problems may include, but are not restricted to, the loss of soil fertility, the contamination of water resources, reduction in bee populations, spray drift, and general ecosystem and diversity problems in geographical locations (Broome & Warner, 2008; Gabzdylova et al., 2009; Hughey, Tait, & O'Connell, 2005). Inappropriate usage of chemicals destroys the natural defense systems of a vineyard and results in the use of stronger chemicals and consequently larger environmental issues (Pimentel, 2005). Research shows that the usage of chemicals is much higher in the wine industry compared to other crops (Forbes, Cullen, Cohen, Wratten, & Fountain, 2011), which also raises the question of the effectiveness of current vineyard management regimes (Christ & Burritt, 2013) and has resulted in a growing trend towards organic production in regions such as New Zealand and California (Leenders & Chandra, 2013).

On the other hand, different stakeholders such as community groups have criticized winemakers for the improper use of land space (Christ & Burritt, 2013). In recent years, the wine industry has had rapid expansion, especially in countries such as New Zealand, Australia, and the USA based on single-crop cultivation (Marshall, Cordano, & Silverman, 2005; Pullman, Maloni, & Dillard, 2010; Taplin & Breckenridge, 2008). This rapid expansion

has resulted in the loss of biodiversity, and concentrated regional contamination and pollution, which have caused social issues such as impacts on neighboring land and the market value of properties (Barber, Taylor, & Strick, 2009; Marshall et al., 2005; Overton, 2010; Pullman et al., 2010; Tee, Boland, & Medhurst, 2007).

Another environmental concern relates to the contamination of water resources (surface and ground), with leaching of chemicals from vineyards, or polluted water that has not been treated properly in the winery (Barber et al., 2009; Musee, Lorenzen, & Aldrich, 2007). This issue is among the most important of problems in the New Zealand context (Dodds et al., 2013; Gabzdylova et al., 2009). Research implies that over 70% of the water intake in wineries goes to waste due to ineffective practices (Knowles & Hill, 2001). Inefficient usage of water for irrigation; cleaning and sanitation purposes; and cooling during fermentation process has been criticized in the literature. It has been argued that wine makers use between 2000 to 3000 liters of water to process one ton of grapes (Gabzdylova et al., 2009). Moreover, the quality of the waste water with low pH and high level of sulphides, sodium, and organic pollutions, result in greater environmental concerns (Mosse, Patti, Christen, & Cavagnaro, 2011; Taylor, 2006).

Besides water contamination, solid waste is another source of environmental degradation. Organic wastes such as grape marc, lees, pomace, stalk and dewatered sludge, require treatment before disposal (Ruggieri et al., 2009) and inorganic wastes including packaging materials, used chemical containers, and disused pallets need landfill disposal or recycling (Gabzdylova et al., 2009), which can be complicated and expensive (Gabzdylova et al., 2009). There are four different approaches for recyclyng plastics waste; mechanical, chemical, energy recovery, and landfill. Among these four, landfil recovery is the most common approach in New Zealand and the issue of solid waste is identified among the most relevant environmental problems in the New Zealand wine industry (Dodds et al., 2013; Gabzdylova et al., 2009).

Winemaking is also an energy-intensive process. Producing one bottle of wine creates about 0.41 kg to 1.6 kg of carbon-dioxide (Ardente, Beccali, Cellura, & Marvuglia, 2006; Christ & Burritt, 2013; Smyth & Russell, 2009)[15]. Post-production logistics and distribution

[15] The same amount of energy correleted milk produces around 0.42–1.06 kg of carbon-dioxide in New Zealand or 0.58–1.09 kg in Switzerland (Flysjö, Henriksson, Cederberg, Ledgard, & Englund, 2011)

of heavy and bulky packages of wine to consumer markets add to this problem (Christ & Burritt, 2013). The latter can be quite important for the New Zealand wine industry because of its exporting strategy and isolated geographical location. Energy intensity in turn contributes to the process of global warming. According to Webb, Whetton, and Barlow (2008) there is a strong relationship between the climate where grapes are grown, and the ultimate quality of the wine. This association indicates the vulnerability of this industry to climate change (Christ & Burritt, 2013; Dodds et al., 2013) and highlights the need for more effective and efficient ways of using energy in this industry.

Nevertheless, awareness about environmental problems is rising both among producers and consumers (Bonn, Cronin, & Cho, 2015; Dodds et al., 2013; Stewart, 2007). Considering the competitive advantage afforded by New Zealand's green and clean image (Dodds et al., 2013; Gabzdylova et al., 2009), and raising awareness among different societal groups (Dodds et al., 2013), addressing these environmental issues is crucial for stakeholders in this industry in order to maintain and enhance their domestic and international markets. Different strategies are used by actors in the wine industry to overcome the above-mentioned issues, which are further discussed in the following section.

6.1.2 Alternative Practices in the Wine Industry at Niche Level

Stakeholders have used different approaches to address environmental concerns in the wine industry in New Zealand. Both top-down regulative approaches, and bottom-up voluntary activities, are important and relevant. For example the Sustainability Wine New Zealand (SWNZ) program, initiated in 1994 and now governed by the New Zealand Winegrower organization (Dodds et al., 2013; Hira & Benson-Rea, 2013), has a top-down approach to incorporate sustainability rules holistically in the industry. This program acts as the bottom-line for different activities in the industry to maintain and improve the overall quality of the practices in a social and environmental sense (Forbes, Cohen, Cullen, Wratten, & Fountain, 2009; NZW, 2014d). The New Zealand Winegrowers organization aims to have all wineries and vineyards work under this standard, which highlights the focus of the country on sustainability (Dodds et al., 2013). This initiative provides best practices for environmental practices and guarantees a better quality assurance for consumers and producers from the vineyard to the bottle. The long history of this standard in the wine industry has institutionalized the trends for continuous

improvements towards sustainability objectives and facilitates the technology transfer and knowledge sharing among companies.

On the other hand, some proactive companies address environmental problems through their entrepreneurial strategies, which include but are not restricted to organics, biodynamics, CarboNZero-certified, ISO 14001 and lean production. Some may have adopted mixtures of these practices depending on their situation and their overall goal (Dodds et al., 2013; Gabzdylova et al., 2009; Hughey et al., 2005). This research focuses on proactive entrepreneurial companies and investigates some of the sustainability-driven entrepreneurs that have priorities for organic, biodynamic, and carboNZero practices in this industry. Table 6-3 shows the definitions for these terms.

Table 6-3 Definitions of alternative environmental practices in the wine industry

Alternative environmental practices	Definition
Organic	Organic production is defined as "*a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved*" (IFOAM, 2015; NZW, 2015c)
Biodynamic	Biodynamic production is defined as "*a spiritual-ethical-ecological approach to agriculture, gardens, food production and nutrition*" (Biodynamic Association, 2015)
carboNZero	carboNZero and CEMARS certifications are independent endorsements of commitments that take place in order to manage the carbon footprint (Landcare Research, 2015)

The aim of this study is to examine how these entrepreneurial companies interact with the business environment to gain resources, what their roles are in the legitimization of new approaches, and how environmental factors influence their roles to bring about wider changes at the industry level. This case study, as one of the two case studies in this thesis, gives a richer picture of the roles and strategies of entrepreneurial companies in the process of creating a strong niche in their industry, which consequently may scale up and bring about wider changes. The characteristics of the wine industry in New Zealand as a young, fast-growing industry, which works co-operatively in different regions, bring new dimensions to the overall goal of this thesis.

6.2 DATA COLLECTION[16]

As discussed in Chapter Four, purposeful sampling was employed to gain access to suitable sources of information for this case study. The six sustainability-driven entrepreneurs comprising the sample were selected at the initial stage based on the definition provided in this chapter and the criteria described in Chapters Two and Four (mentioned in Section 4.5.2.2). Details for how the sample members meet criteria 2 and 5 are shown in Table 6 4 to Table 6 9. It was confirmed that they all meet criteria 1 and 4 [founded with environmentally and socially-friendly practices (Green-Green companies), by entrepreneurs considered pioneers in the wine industry regarding those practices] in the interviews, with triangulation from websites and media reports on their organizations. Criterion 3 (financial viability) is potentially a tricky consideration, as all of these organizations are private and do not release their financial records. The word of the entrepreneurs was accepted in this regard, with corroboration sought from interviews with other actors in their business environment as well as based on the longevity of the business itself.

Table 6-4 Pseudonyms and characteristics of SE – 2.1 – carboNZero

Chris – SE – 2.1 - Marlborough		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature with energy efficient practices	• Developing community gardens • Preserving land and biodiversity by crop diversity across the vineyards
	Services	• Preserving nature by creating wetlands and planting native trees	• Encouraging community culture

[16] There is no overlap between the sustainability-driven entrepreneurs in this case study and the case study presented in the previous chapter.

Table 6-5 Pseudonyms and characteristics of SE – 2.2 – carboNZero, organic

Susan – SE – 2.2 - Marlborough		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature with energy efficient practices • Preserving nature with organic practices	• Preserving land and biodiversity by crop diversity across the vineyards
	Services		

Table 6-6 Pseudonyms and characteristics of SE – 2.3 – carboNZero, organic

Graham – SE – 2.3 - Nelson		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature with energy efficient practices • Preserving nature with organic practices • Preserving nature utilizing water efficient systems	• Partnership with local and national organizations active in environmental and social stewardship
	Services		

Table 6-7 Pseudonyms and characteristics of SE – 2.4 – Biodynamic

Bruce – SE – 4 - Marlborough[17]		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature by biodynamic practices	• Preserving land and biodiversity by crop diversity across the vineyards
	Services		• Encouraging community culture and diversity

[17] Interview with the manager and representative of the entrepreneur who were involved in the company since startup

Table 6-8 Pseudonyms and characteristics of SE – 2.5 – Biodynamic

George – SE – 5 – Central Otago[18]		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature by biodynamic practices	• Preserving land and biodiversity by crop diversity across the vineyards
	Services		

Table 6-9 Pseudonyms and characteristics of SE – 2.6 – Biodynamic

Adam – SE – 6 – Central Otago		preservation and advancement in any of	
		Nature	Community
By introducing new	Products		
	Processes	• Preserving nature by biodynamic practices	• Preserving land and biodiversity by crop diversity across the vineyards
	Services		

The process of data collection was continued by theoretical sampling among the other actors who were identified as influential in the entrepreneurial process. These actors were selected in response to emerging themes from the initial stage to shed light on different dimensions of entrepreneurial actions. These actors include representatives of third-party certifiers, representatives of trade associations, NGOs, and governing bodies among others. These actors were mentioned by the sustainability-driven entrepreneurs in initial interviews. Table 6-10 shows the detailed list of the other participants in this research.

Moreover, websites of the companies and organizations such as New Zealand Winegrowers, and Organic Focus Vineyard were used as secondary sources of data. The researcher followed the profile pages of companies and relevant organizations on social networks, such as Facebook, during the time of data collection, and relevant information

[18] The entrepreneurs SE – 4 and SE – 5 were included from the Central Otago region because they were considered pioneers for initiation of biodynamic and organic practices in New Zealand, and were identified as influential in this industry with regards to their new practices. Their inclusion in the thesis was a direct result of repeated referrals from other interviewed entrepreneurs from Nelson and Marlborough.

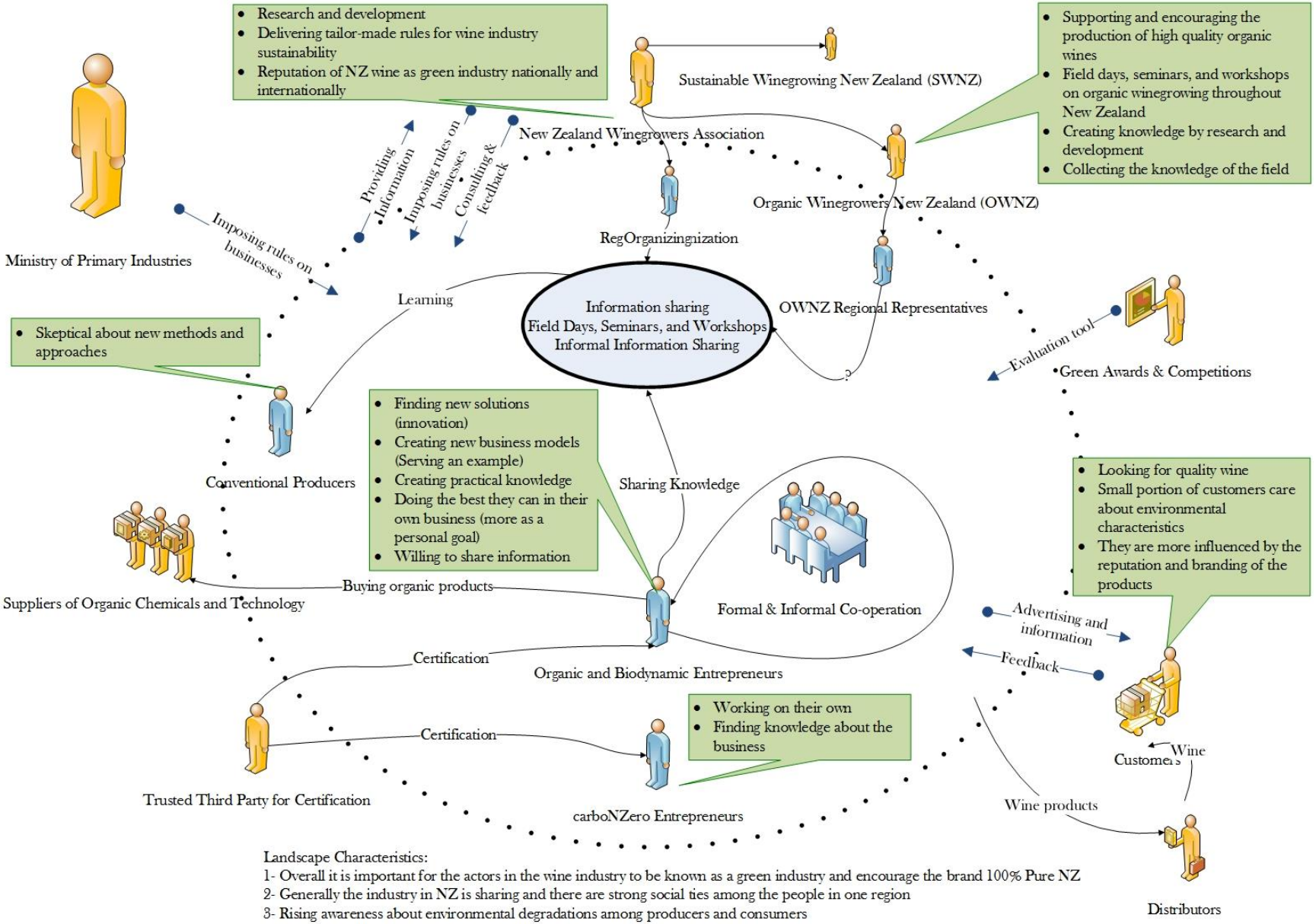
was used whenever necessary. Furthermore, as the research examines the emerging changes at the system level, other sources of data such as news and information available in mass media and newspapers were used to find a more holistic perspective. Collection of data from different sources and the close contact of the researcher with the events in this industry helped to capture a broad picture about the situation.

Table 6-10 Pseudonyms and characteristics of other actors interviewed in this case study

Pseudonym	Position	Position
Alastair	OA – 2.1	Entrepreneur - Company - Early adopter of organic practices
Andrew	OA – 2.2	Entrepreneur - Company - Early adopter of organic practices
Craig	OA – 2.3	Third-party certification
Blair	OA – 2.4	Third-party certification
Neal	OA – 2.5	Researcher and University lecturer expert in wine industry
Nigel	OA – 2.6	OWNZ Representative Marlborough
Walter	OA – 2.7	OWNZ Representative Nelson
Herman	OA – 2.8	NZW Representative Nelson
Isaac	OA – 2.9	NZW Representative Marlborough
Ralph	OA – 2.10	SWNZ National Coordinator
Sharon	OA – 2.11	OWNZ National Coordinator
Russell	OA – 2.12	OWNZ Representative

As comprehensively discussed in Chapter Four, the interviews were transcribed and then coded with NVivo software by the researcher. Coding results were used after each interview to draw graphical representations of situations under study. These graphical representations were used during the process of data collection, in the discussions with participants, to talk about the previous findings and to find more detailed information about the situation. These graphical representations helped the researcher and interviewees to talk about the details of entrepreneurial actions while having a holistic picture about the situation. The participants, at different occasions, confirmed or expressed a different opinion about the major themes conceptualized in these pictures, which helped to clarify details and add to the depth of research. Examples of these graphical representations are shown in Appendix Five and the final picture is shown in the Figure 6-2 followed by the findings in this case study.

Figure 6-2 The final rich picture of the wine case study



6.3 FINDINGS

The findings in this case study are presented in four main sections. The first part explains life experiences of the sustainability-driven entrepreneurs. It discusses how entrepreneurs' backgrounds form their intentions to develop new forms of organizations. The second section describes the roles and strategies that the participants have considered for the sustainability-driven entrepreneurs in order to introduce and justify their actions in their business environment. This section is divided into three main categories: (a) learning; (b) networking; and (c) articulation of expectations and meanings; which is abstracted from SNM literature. The third section describes the key socio-economic factors that influence the wider effects of the entrepreneurial roles and strategies followed by a section presenting the network of entrepreneurs, who are considered by the participants as influential in the previously-mentioned themes.

Similar to the previous chapter, the findings are presented in three different perspectives whenever needed: (1) the Sustainability-Driven Entrepreneurs; (2) Other Actors; and (3) All Participants (AP - both groups together). Whenever necessary, the number of 'codes' resulted from the initial coding process is mentioned to support the arguments. These numbers clarify the instances that participants have stated as specific topics of interest in the incident-by-incident coding process.

6.3.1 BACKGROUND AND INTENTIONS OF ENTREPRENEURS

This section discusses the backgrounds and intentions of sustainability-driven entrepreneurs. The majority of the sustainability-driven entrepreneurs (4 out of 6 SE – 13 Codes) reported that their life experiences were crucial in forming their intentions and shaping their basic knowledge necessary to start their new practices. Moreover, the majority of other actors (10 out of 12 OA – 18 Codes) described the sustainability-driven entrepreneurs as passionate individuals who persist in their innovative practices. Their intentions to address environmental and social concerns and their passion to overcome difficulties inspire them to think out of the box, and form their new entities. While this section does not directly answer the research questions in this thesis, it was necessary for contextualization of the findings in other sections and provides appropriate background data for the following discussions. These notions are explained in the following themes:

(1) life experiences of sustainability-driven entrepreneurs; (2) being passionate about their social and environmental goals; and (3) being proactive and thinking out of the box.

6.3.1.1 Life Experiences of Sustainability-Driven Entrepreneurs

The majority of the sustainability-driven entrepreneurs (4 out of 6 SE – 13 Codes) reported their concerns about environmental issues. They discussed how their life experiences have led them to become aware of environmental degradation and discussed that their current practices have originated from those personal worries.

> *Our orchard has been around for a very long time and when I went to spray sheet it was horrifying, what I saw in there… Our boys were really young and they would be playing in the orchard and the water that we drunk came from the well which was taking water from the village and it made me feel uncomfortable. [Graham – SE – 2.3]*

The sustainability-driven entrepreneurs search for solutions and address those issues through their businesses to address the concerns and pursue their personal intentions. For some of the sustainability-driven entrepreneurs (3 out of 6 SE – 10 Codes), their business and educational background enriches their knowledge, necessary for the exploitation of entrepreneurial opportunities. Their intentions, along with the knowledge and experience gathered through the course of time, inspire them to act and develop their new forms of organizations. George - SE - 2.5 explained this process and emphasized the personal intentions behind these activities:

> *It just happened that over the way that we have looked at different ways that we have seen, essentially following our own investigations and education over the years, that is the most effective and enjoyable way of doing it. Obviously, the environmental concerns are real and they are out there. We share those concerns, but if there was a better way to farm then we would probably be doing it. That is really much about the personal relationship between us and our land and the way that we wish to farm it. [George - SE - 2.5]*

On the other hand, a few of the sustainability-driven entrepreneurs (2 of 6 SE – 12 Codes) discussed looking at other examples in other places to find appropriate solutions for their social and environmental concerns. However, the participants discussed that adopting those models in New Zealand and across different locations may need different practical and institutional knowledge. Adopters of these practices have to figure out how they can justify their new practices to their locations and localize the knowledge in their context. For example, Adam – SE – 2.6 reported:

> *In the early days… there was very little machinery in New Zealand to manage the weeds under the wines organically, so the viticulturist and myself, we made trips to elsewhere in New Zealand, Australia, California, Oregon, looking at equipment… we were trying to find suitable equipment that would work on our soils and in the way our growing system works, so that was the challenge. [Adam – SE – 2.6]*

The findings suggest that the sustainability-driven entrepreneurs have personal concerns about environmental degradation, which have formed during their life experiences. They either use their business and educational experiences, or look at similar examples in other parts of the world to find their initial knowledge, to commence their new practices in their industry. The participants discussed the passion and emotional attachment of the sustainability-driven entrepreneurs to their social and environmental goals, as reported in the following theme.

6.3.1.2 Being Passionate about Their Social and Environmental Goals

All the sustainability-driven entrepreneurs (6 out of 6 SE – 8 Codes) discussed their passion for solving social and environmental problems. Driven by their personal philosophies, the sustainability-driven entrepreneurs may find satisfaction by achieving their non-financial goals. They were not necessarily looking for economic gain or external acknowledgment for their socially- and environmentally-friendly practices. For example, Susan – SE – 2.2 discussed her personal intentions pursuing her social and environmental goals:

> *A very personal thing that we have done! The benefits are not very transparent, but it makes us feel very good! That has to be the baseline… because sometimes that is all you live for, it's just the thing that you want. [Susan – SE – 2.2]*

Similarly, the majority of the other actors (10 out of 12 OA – 18 Codes) reported that the sustainability-driven entrepreneurs are passionate about their innovative methods. They described the entrepreneurs as motivated individuals who get involved in their new practices because of their strong personal philosophy. For example, Walter - OA – 7 reported:

> *Particularly the likes of [the pioneer sustainability-driven entrepreneur], and say the guy from [name of the pioneer company], or [name of two other sustainability-driven entrepreneurs], are about passion, and about true undying beliefs in what we're doing is the best thing to make wine… and good for the land and the environment. [Walter - OA – 7]*

These sustainability-driven entrepreneurs consider their innovative methods as the best ways to produce wine, which comes along with social and environmental benefits. Consequently, they insist on their new practices and try to find solutions for the problem lying ahead of achieving their social and environmental objectives. Sharon - OA – 11 described this persistent as stubbornness and labeled sustainability-driven entrepreneurs as passionate advocates of their philosophy:

> *To tell you the truth, some of it comes through stubbornness; that they really believe in their opinion and how possible and good for the land and for the wines Organic Growing really is, so they are really passionate advocates. [Sharon - OA – 11]*

The findings show that the sustainability-driven entrepreneurs are driven by their personal philosophies and may have different definitions of success other than financial performance. They may set personal criteria for the evaluation of their business and search for personal satisfaction. They are not driven by outsiders' acknowledgments and restrictive regulations. Isaac – OA – 9 describes them as:

> *The ones who are more passionate about their work are quite different. I think, they are probably, I would not say less successful, but they have different motivations, you know… everyone's motivation is different in business, and you know, some of these people are conventional, might be really small and just doing superbly well and likewise someone in organics or biodynamics may be medium-scale and just achieving everything they have set out on their business plan, thinking, 'Yup! I am doing that really well and I am totally contained'. So hard to say! Success means different things to different people, doesn't it? [Isaac - OA – 9]*

Addressing their environmental concerns and being passionate about their innovative approaches helps them overcome difficulties and encourages them to be more persistent in pursuing their social and environmental goals. They build upon their initial knowledge and take the risk to employ proactive strategies towards their objectives, as discussed in the following theme.

6.3.1.3 Being Proactive and Thinking Out of the Box

The sustainability-driven entrepreneurs discussed employing proactive and progressive strategies to challenge themselves and their employees to learn and develop a strong organizational culture for pursuing their social and environmental goals. The energy and motivation coming from the entrepreneurs drives other people around them to pursue

their innovative ideas. For example, Chris - SE - 2.1 describes himself as a dreamer that proposes new ideas and encourages his employees to make the ideas come true, or

> *We are always looking for new ways to do things better and that is just our makeup and our drive. We are always looking for challenges to do things in a better and more sustainable way... I suppose, without being egotistical, I am the dreamer. I come up with the concepts and to a degree I drive them, and by doing that and being there it gets the others involved... and you drive it, and often and nearly always, it has to be driven, otherwise it will fall in. [Chris – SE – 2.1]*

Likewise, Bruce - SE - 2.4 reported that the owner's personality in the business puts them in a continuous learning process that is always evolving:

> *I guess having someone with the personality of [a sustainability-driven entrepreneur]; he is always looking ahead, and trying to make sure that he pushes us. So, therefore, it is hard to say [that] this is the complete finished shape of what we are going to be, because [he/she] is always coming up with new ideas. [Bruce - SE - 2.4]*

Some of the other participants (3 out of 12 OP – 8 Codes) reported that sustainability-driven entrepreneurs are willing to risk and pursue their goals when there is no similar example around them. They might be considered as fringe actors who are performing out of the norms in their industry, but their strong personal philosophies help them to be persistent in their actions. For example, Sharon - OA – 11 explained:

> *It takes a certain sort of personality and a certain sort of mind to really take the risk to do something different. So for a while, they were really only a handful of organic companies in the wine industry in New Zealand. [Sharon - OA – 11]*

The findings suggest that the strong personal intentions of the sustainability-driven entrepreneurs encourage them to think out of the box and challenge themselves with new ideas, they take the lead and responsibility for making things happen. Being proactive, willing to take risks, and employing proactive strategies helps sustainability-driven entrepreneurs to overcome the difficulties and develop their businesses.

6.3.1.4 SUMMARY

This section explains the backgrounds and intentions of the sustainability-driven entrepreneurs. It discusses how life experiences of the sustainability-driven entrepreneurs, and their previous work and educational background, form their intentions and bring about the initial knowledge necessary for their new practices. The section explains that most of the sustainability-driven entrepreneurs in this research have

a strong belief in their alternative approaches. These strong intentions encourage them to persist in their new practices and employ proactive strategies to pursue their social and environmental goals. They motivate their employees and drive them to develop strong collective intentions towards such goals. This combination brings about the energy and resources necessary for developing their new forms of organizations. The new entities need to be introduced and justified in their business environment. Norms and frameworks of the dominant trends are not aligned with these new approaches. The sustainability-driven entrepreneurs have to employ different strategies to find access to scarce resources. These strategies and roles are discussed with the entrepreneurs in this research and presented in the following section.

6.3.2 Main Roles and Strategies for Forming a Robust Niche

This section of the findings explains the roles and strategies that the sustainability-driven entrepreneurs have with regards to their new practices, to legitimize their actions and find wider acceptance among other actors in their industry, in order to create a robust niche. The results demonstrate that a variety of roles are adopted by the sustainability-driven entrepreneurs in the wine industry to interact with the business environment and, if possible, change it in their favor. These roles and strategies may vary at different phases of evolution. They start at the corporate level, by interactions among entrepreneurs, individuals, businesses, and other organizations. If new practices are successfully adopted by other organizations and institutions, they may find more collective natures. The findings are discussed in three main categories: (1) learning; (2) networking; and (3) articulation; which originate from Strategic Niche Management literature.

6.3.2.1 Roles and Strategies For Learning

This section of findings discusses how the sustainability-driven entrepreneurs in this research are playing roles in developing a robust knowledge for their niche network, by giving schemata to haphazard information about their new practices and creating new organizational forms. The participants explained that the entrepreneurial companies learn through trial and error, and legitimize their new ideas. The sustainability-driven entrepreneurs' roles for learning can be categorized in to three main themes: (1) learning through experience; (2) finding better awareness; and (3) passing knowledge to new organizations, as discussed in the following sections.

6.3.2.1.1 LEARNING THROUGH EXPERIENCE

Most of the sustainability-driven entrepreneurs (4 out of 6 AP –6 Codes) reported that they did not have a master plan for their new practices and they learned through a process of trial and error. They started their businesses when there were no examples or best practices in their local settings to be associated with their methods. For example, Susan - SE - 2.2 complained about the lack of structured information when she started her business and explained that she and her team had to learn and develop everything on their own. The path was created and legitimized by the actions they have taken through their journey. She reported:

> *At that stage in the early 1990s, there was not a huge amount of formatted information on what [to do] and how to do it. It was more haphazard… there wasn't a lot of back-up information… I don't know if we could have changed anything, because it was all so new. You were one of the first into the sustainability program, one of the first into the carbon neutral, one of the first sort of [organic-certifier]. I have learned so much in each process, so I don't see that we could have improved anything. [Susan – SE – 2.2]*

One of the early adopters of organic practices (see Table 6-10) reported that the current status of their business is the accumulation of the decisions that they have made through time. While they consciously wanted to act in a socially- and environmentally-responsible way, there was no predefined pathway towards these goals in their industry. They create new ways to address their environmental concerns, while they examine their new methods in practice. Alastair – OA – 2.1 explained:

> *You know, there is no master plan for doing that! It is just each little decision you come across, what call you make on it, and the total result is just the accumulation of all those decisions. [Alastair – OA – 2.1]*

Sustainability-driven entrepreneurs discussed applying and revising the theoretical knowledge in practice, while they are figuring out how certain models can be modified to be practically-acceptable for their situation. For example, Susan – SE – 2.2 reported:

> *Well, we all know how to use certain things. We have learnt about it at school, but you have to learn how to use it with your own winery and within the vintage. [Susan – SE – 2.2]*

The findings suggest that the learning process through trial and error, along with the development of practical experience, accumulates the knowledge of new practices among the sustainability-driven entrepreneurs. It revises and enhances the new methods and

gives form to haphazard information about their new approaches. Intentionally thinking about solutions to develop socially- and environmentally-friendly practices helps them acquire a better understanding about their businesses and improvises new solutions to decrease their undesired social and environmental consequences. This is discussed in the following theme.

6.3.2.1.2 Developing Better Awareness

Almost all of the sustainability-driven entrepreneurs (5 out of 6 SE – 19 Codes) discussed that learning through the processes of development helped them to personally build a better understanding of their own businesses. Thinking about the difficulties in front of their innovative activities raises their awareness about the consequences of their everyday practices and encourages them to move further and solve those issues. For example, Graham – SE – 2.3 reported:

> *We have to understand our business now. Intuitively, you know, you think you understand your business, you bought the land, you planted the ground, you walk around, you kind of know everything, but getting into CarboNZero program means that you become much more aware of the individual activities that you operate on in you vineyard. [Graham – SE – 2.3]*

He discussed that they are consciously thinking about improvements in their social and environmental goals, as they are more aware about the consequences of their decisions. Bruce - SE - 2.4 portrayed the same opinion about organic farming. In his perspective, a competitive organic farmer should have a better understanding about different features of a farm because of better observation practices:

> *Depending on the conditions, it is more about sensitivity and understanding and the ability to predict well. [Bruce - SE - 2.4]*

Although, as will be discussed in Section 6.3.2.2.2, the pro-activeness of the sustainability-driven entrepreneurs may change through the time. The results show that the sustainability-driven entrepreneurs may move across proactive actors or self-centered businesses based on their available resources and environmental constraints, in order to protect their financial viability. Hence, they constantly adjust their strategies and they may not employ such proactive approaches at all stages of development. If their new practices become more accepted among other organizations, and they could form collective actions, the sustainability-driven entrepreneurs might play a different role for knowledge-creation at population level, as discussed in the following theme.

6.3.2.1.3 Passing Knowledge to New Organizations

While the sustainability-driven entrepreneurs have a critical role in the creation of knowledge for new practices, initiation of new entities at population level highly influences the process of diffusion. In this case study, organic practices were adopted by a wider community of organizations and they formed collective actions and initiated an entity named Organic Winegrower New Zealand (OWNZ) (NZW, 2015d)(Further explained in 6.3.2.2.4). OWNZ revises and enhances the knowledge of organic practices at the niche level. It conducts research and development projects such as Organic Focus Vineyards, which systematically demonstrates to other organizations in the industry how they can convert to organic viticulture (NZW, 2015d). Sharon - OA - 11, who is responsible for this project, explained:

> *I am coordinating a research project, Organic Focused Vineyard project, which is a three-year project; essentially introducing walking people through the organic conversion process. It is a research and demonstration project. [Sharon - OA – 11]*

This entity captures the knowledge and institutionalizes it through documentation and scientific proof. Some of the participants (3 out of 18 AP – 3 Codes) reported that the sustainability-driven entrepreneurs, as knowledgeable people about the new practices, share their knowledge with new organizations and make it available through more formal conduits for wider audiences. They actively contribute to this organization by volunteering their time and participating as board members (NZW, 2015d). Nigel - OA - 6 reported:

> *They [sustainability-driven entrepreneurs] are there, because they have been elected and everybody knows that they know a lot. [Nigel - OA – 6]*

In summary, when the population of new forms of organizations grows they may initiate collective actions and form new entities. In this case, organic practices found wider acceptance among other actors and could form a new entity called OWNZ. This new entity captures the best practices in the field and revises the available information in a systemic way. They conduct experiments in different locations and create formal practical examples for interested parties in their local settings. This process formulates a robust and coherent knowledge of new methods at industry level. Formal, documented knowledge institutionalizes new trends and makes the imitation process easier for people who want to adopt these new practices. Sustainability-driven entrepreneurs as knowledgeable and experienced actors share their knowledge with the new entity and

translate the tacit knowledge among them to document implicit schemata within this organization. This documented knowledge eventually becomes available in a more systemic way among wider populations and locations.

6.3.2.1.4 SUMMARY

This section explains the roles and strategies that the sustainability-driven entrepreneurs play in creating a robust knowledge of their new practices. It discusses that the sustainability-driven entrepreneurs learn through a process of trial and error. Since they were considered pioneers in their industry they had to learn and create schemata for their new practices. They build upon their initial knowledge, which is based on their life experience or other examples in other geographical locations, as was discussed in section 6.3.1.1, to accumulate knowledge. Moreover, they develop practical knowledge, and through practice they develop deeper understandings about the consequences of their actions. Hence, they gradually improvise new solutions and plan towards more enhancements. However, these proactive strategies are influenced by their available resources and environmental constraints, which is further discussed in Section 6.3.2.2.2. The legitimized practices of sustainability-driven entrepreneurs may create valid alternatives to the dominant practices in the wine industry that can be adopted by other actors. The legitimization process may be facilitated by positive institutionalized norms towards environmentally friendly practices in this industry that were enhanced and maintained by standards such Sustainability Wine New Zealand, and further discussed in Section 6.1.2. If other actors adopt a new practice, which has happened for organic wine production, they could form a bigger population and initiate collective actions, which in this case has resulted in the formation of a new entity called OWNZ. At this stage the sustainability-driven entrepreneurs, as knowledgeable and experienced people, share their knowledge with this new entity. OWNZ captures this knowledge and conducts research and development projects to enhance and revise it, and make it available through more formal conduits for wider networks in their forming niche. This transfers the tacit knowledge, among the sustainability-driven entrepreneurs, to implicit. This process of knowledge sharing is enhanced by the cooperative and sharing environment of the wine industry in New Zealand that has been influential in other similar contexts such as formalized seminars and cooperative marketing. The sustainability-driven entrepreneurs discussed cooperating and networking with other actors in their business

environment to introduce and justify their action. This notion is discussed in the following section.

6.3.2.2 Roles and Strategies for Networking

The sustainability-driven entrepreneurs, who participated in this research, were considered pioneers in their industry when they have started their new practices. Hence, they had to convince other actors and develop their networks in order to gain resources and form a robust niche, which eventually may translate to become the dominant regimes in their socio-technical system. This section of the findings demonstrates how these entrepreneurs use different strategies and play a variety of roles to legitimize their actions and find support among other organizations and institutions. These strategies can be classified into (1) informal information sharing; (2) acting as a practical example; (3) demanding institutional support; (4) forming new institutions; and (5) cooperative marketing. These themes are discussed in the following sections.

6.3.2.2.1 Informal Information Sharing

The majority of the sustainability-driven entrepreneurs (5 out of 6 AP – 20 Codes) in this case study reported that they are willing to share their knowledge with other interested actors in the business environment. For example, Adam – SE – 6 reported:

> *Oh well! You know! There is something that we used to doing is sharing information with other vineyard owners if we got some issues. [Adam – SE – 6]*

Almost half of the other actors (5 out of 12 OA – 13 Codes) also discussed that while these entrepreneurs, in most of these situations, could use their new methods to their competitive advantage for their niche market, they are willing to share. Considering the intentions and the passion of the sustainability-driven entrepreneurs, they like to encourage other people to use the same practices. They lend support and confidence to interested actors through this information sharing. For example, Sharon - OA – 11 and Isaac - OA – 9 reported:

> *Organizing conferences, speaking at events, really putting themselves out there, and sharing the result and sharing their knowledge and they are willing to do that! For some of these people it is actually giving information to their competitors, if you look at it from a business point of view, but they want to do this because they want more people to grow organically. [Sharon - OA – 11]*

> *These people do share! They really do try to convert the mass, kind of like a religion, they are out there saying come and join us and we will support you. [Isaac - OA – 9]*

The participants explained that information sharing initially happens at the organizational and individual level. When the number of businesses with new practices is small, the sustainability-driven entrepreneurs and their employees share information through informal social interactions with other people in their networks. Hence, information sharing may take place through a variety of experiences based on situations and personal preferences. Graham – SE – 2.3 described this:

> *There is that kind of exchange of ideas and collective or you know solving problems with people who have got similar kind of challenges going on. It is just part of the background noise in the industry from time to time. You get together with some of those people, would say let's have a wine tasting and wine tasting is not about drinking wine or about evaluating a wine and so we are trying to work out how someone end up doing this... So there is quite a lot of information being shared along. [Graham – SE – 2.3]*

Social characteristics of the wine industry, such as being cooperative and sharing, as discussed before in Section 6.1, facilitate the information sharing process. Indeed, this information sharing is a common practice for all types of companies in the wine industry, which may highlight the influence of norms on success and failure of entrepreneurial actions. These institutionalized norms may encourage the sustainability-driven entrepreneurs to be more proactive in their information sharing strategies. However, the participants discussed different levels of cooperation based on types of practices. For example, the carboNZero entrepreneurs interviewed in this study, complained about the lack of information sharing related to their activities, which may stem from the lack of interest among other actors or the small number of producers who have adopted carboNZero practices. Graham - SE - 2.3 reported that because there is no similar model of their practices in their industry, they are not able to share information with other companies. The lack of information sharing for these activities challenges their learning process, as they have to work alone and figure out how they can deal with different issues and problems on their own:

> *One of the challenges in carboNZero for us as a winery is that there is no pair out there. You know! I mean you can't compare a winery producing 120 000 liters with the winery producing 8 million liters. There is a whole new economy of scale, a whole new challenge and that's one of the difficulties; it is at the moment when you are kind of out there as trailblazer. If there were ten wineries that were our size that were in the program, I am sure we'd all learn from sharing information. [Graham – SE – 2.3]*

The findings suggest that information sharing helps sustainability-driven entrepreneurs in the process of learning, mentioned in Section 6.3.2.1.1, and result in more efficient use of resources. It also helps interested actors in the business environment to gain the initial knowledge for adoption of new practices. While the sustainability-driven entrepreneurs share information with interested parties, they also want to act as role models for other actors who are skeptics about their new practices. This notion is discussed in the following theme.

6.3.2.2.2 Acting as Practical Examples

A theme emerging from the data shows that the sustainability-driven entrepreneurs act as examples for other producers in their industry. Almost all of the sustainability-driven entrepreneurs, (5 out of 6 SE – 13 Codes), reported that showing other businesses that it is possible to successfully work with alternative environmental practices is an important part of their role. The other actors (6 out of 12 – 9 Codes) discussed that the sustainability-driven entrepreneurs are willing to be identified as practical solutions for their environmental and ecological concerns. Susan – SE – 2.2 explained:

> *I think being, staying in business, and being successful, make people consider that you might be doing something that is interesting, so there is that side to it. [Susan – SE – 2.2]*

Similarly, George - SE - 2.5 discussed their desire to be an inspiring model for other businesses, as they have used other examples to develop his new practices:

> *At least we were able, perhaps, to be inspiring and helping other people through workshops and through visits and you know in the same way that I visited and looked at other people around in Germany. [George - SE - 2.5]*

The sustainability-driven entrepreneurs reported that their actions, as successful producers with environmentally-friendly practices, would give confidence to other skeptic companies to choose the same pathways. The reputation of the sustainability-driven entrepreneurs in producing good quality wine and their success in different markets may facilitate this process and establish a trust in their new practices as described by two of the interviewed sustainability-driven entrepreneurs, Adam – SE – 2.6 and Bruce - SE - 2.4:

> *I don't think we had any sort of significant role to play, apart from the fact that you, know you, become, I guess, a bit of a role model and inspiration to other vineyards. When they look at the quality of our wines, and you know, the success of the wines in the market position, it must act as some sort of inspiration to other growers. [Adam - SE - 2.6]*

> *I'll be quite sure that we have given a lot of other vineyards confidence to make better wine through organic techniques, and biodynamic techniques. [Bruce - SE - 2.4]*

Successful practices of sustainability-driven entrepreneurs give more confidence and peace of mind to other producers in following their pathways. Other producers are watching new methods to learn how they work, and what the consequences of utilizing them are, which may subsequently affect their own decisions. The participants reported that the successful businesses of the sustainability-driven entrepreneurs create alternatives for the dominant trends in their industry. Moreover, the positive feedback and successful performance of new practices question the 'taken-for-granted' norms in the dominant trends, and conventional producers start to reevaluate their methods when they get this feedback. Craig – OA – 2.3 reported:

> *I can give you an example of that in the viticulture sector, where grape growers use a number of agricultural chemicals that they have believed are essential to producing a good crop, and many of those chemicals are not allowed to be used in organic production, and so once you have a number of producers you have got some pioneers and then you have got some other producers that can produce a crop effectively without using those chemicals, they are demonstrating to the rest of the industry that perhaps they are not as essential as some people have been let to believe. [Craig – OA – 2.3]*

In another example, Graham - SE - 2.3 highlighted that the economic benefits of new approaches may send a positive message to other actors in their business environment about the financial aspects of new practices. Conventional producers may become skeptical about their practices when they realize they can produce good-quality products without using fertilizers (Padel, 2001; Pimentel, Hepperly, Hanson, Douds, & Seidel, 2005). He explained:

> *I think people start to realize, oh hang on a minute! You know! I am putting money into fertilizer, but if I didn't spray, I wouldn't need that fertilizer, because the plant would start looking after itself. [Graham – SE – 2.3]*

Moreover, one of the participants who was involved in organic production in different positions as farmer, third-party inspector, and retail seller, stated that successful alternative models to current dominant regimes may result in acknowledgement from policy-makers. While many environmental problems stem from conventional methods, introducing legitimate alternative practices that solve those issues may leverage the

discussions at political level and gain more support from decision-makers. Blair - OA – 4 reported:

> *By definition, organics is saying that there is something wrong with non-organic agriculture, therefore politicians had to take some notice and if there were problems of pollution or problems of market rejection then there were alternatives, so politicians were torn between trying to ignore it, and having to acknowledge it. [Blair - OA – 4]*

In one case, one of the proactive entrepreneurs was concerned about the chance of failure in achieving his social and environmental goals. Hence, during the difficult financial situation he was more focused on the financial stability of his business, where it also influences his reactiveness with regards to his social and environmental goals, as discussed in Section 6.3.2.1.2. He reported that the failure of his business might induce uncertainty about the new approaches across other organizations, so he was mainly focused on maintaining the viability of his business at the time of interview.

> *If my business failed, then an example to others would fail with it, so I am just being concentrated on my own thing. [George - SE - 2.5]*

To protect their businesses from failure, the entrepreneurs may move across the spectrum from proactive actors to self-centered businesses. They appear to choose different strategies based on their available resources at different stages of evolution. For example, Susan - SE - 2.2 reported that their pro-activeness is very dependent on the financial situation. When there is a chance of failure or access to resources is tight, proactive entrepreneurs may change their strategies and become reactive self-centered units to assure their stability.

> *Prior to the recession, our environmental goals were right up there with the financial [goals]. Due to the pressure from the financial systems through the last four years, we have restrained our environment goals to being very much company-focused. [Susan – SE – 2.2]*

The findings demonstrate that the sustainability-driven entrepreneurs practically show to other actors in the business environment that viable alternative models are available, that have environmental and social benefits. Acting as practical examples and sending positive feedback on performance of new practices may change the cognitive assumptions in the industry. They will be recognized as legitimate identities. Other actors may reevaluate their norms and what they take-for-granted, and adopt the new approaches. This may result in more legitimate organizational forms and a growing population. This trend may

create demand for supporting organizations and institutions in their business environment, as discussed in the following section.

6.3.2.2.3 Demanding Institutional Support

Some of the sustainability-driven entrepreneurs (4 out of 6 SD – 6 Codes) reported that at the early stages of their actions, there was not adequate institutional support from other organizations such as third-party certifiers. As mentioned before, these entrepreneurs are driven by their personal philosophies; hence they did not apply for certifications when they started their business. However, when these new practices such as organic production became more popular, some of the sustainability-driven entrepreneurs decided to be verified by third-party accreditation to protect their work from green-washing and unsupported claims. For example, Adam - SE - 2.6 reported that they applied for organic certification when they felt some companies made false claims about organic practices.

> *Oh! It is very important to have the credibility because I have seen a lot of vineyards and winery owners and wine makers around the world making claims about farming organically and yet it is clearly not true, so we initially were not going to certify because we were not doing it for a sticker on the bottle or for any extra sales or advantage that might bring so by certifying, but then we started sort of seeing that some properties were organic for a little while and then they sprayed something and then they went back to organic and then they have claimed that they are organic, which is clearly not the case, they reserve their right to spray at times, so we wanted to separate ourselves from them and the only way to do that was to be certified. [Adam – SE – 2.6]*

The participants discussed the difficulties in their interactions with third-party certifiers in these early stages. The third-party authorities were not equipped to address the needs of entrepreneurial companies in their specific industry. Susan - SE - 2.2 reported that she had changed her mind to apply for organic certification because in her opinion the procedures and knowledge of the certifier was not coherent when they started their work.

> *We went up and talked to them and it seemed to be at that stage it wasn't concrete enough. [Susan – SE – 2.2]*

Furthermore, certification may not have been developed in a region or a country because there was no demand for certification before the sustainability-driven entrepreneurs initiate their practices. Chris - SE - 2.1 discussed his experience with third-party certifiers at the beginning of his business. He described that there were no regulations in New

Zealand when he applied for certification and enquiries from people like him may have resulted in the development of related standards in this country.

> *I have come across plenty of frustrations and the first one was with the New Zealand [certifier] green building code or green building council or whatever it was when I first wanted to build the best building in the greenest way possible, so we joined up to the leads skin which is an American concept if you like and that time there was no green building code in New Zealand, but six months into it, probably because of enquiry from New Zealand companies like ourselves, there was a green building code established in New Zealand, so we had to leave the leads one and come back to the New Zealand one, and the New Zealand one didn't even have constitution. [Chris – SE – 2.1]*

Some of the other actors (2 out of 12 OA – 5 Codes) confirmed these perspectives. One of the participants from a third-party authority reported that with a growing population of organizations in one industry, third-party certification authorities would be able to invest more resources in these new fields and establish relevant procedures. Craig – OA – 2.3 explained:

> *That is a complicated question. I think, yes it does, indirectly and in particular in developing sectors. If say the pioneers have led something and I can name some in Pep fruit and I can name some in Kiwi fruits and I can name some in say dairy production and definitely in viticulture, which is the area that I am specialized in most at the moment, once there are some pioneers and then there are some followers, [certifier name] can then commit more resourcing to understanding requirements that are specific to that sector in the different markets, and that means that we have more technical knowledge that we can pass on to other producers that are looking to convert and are moving into that market. [Craig – OA – 2.3]*

Development of such knowledge in third-party authorities facilitates the certification process for companies following the entrepreneurs. The participants discussed the same process among other institutions. They reported that by growing the population of companies with similar practices, other institutions such as producers of organic machineries and chemicals, along with educational authorities, would be able to invest more on requirements of the industry. It seems that the sustainability-driven entrepreneurs develop a demand in supporting organizations and institutions, and with a growing population of their practices these supporting institutions are pushed to invest more resources and establish procedures specific to the entrepreneurs' sectors. On the other hand, two of the sustainability-driven entrepreneurs reported that whenever possible, they partner with like-minded businesses. This deliberate selection may form

their networks and create a market for companies that are working towards similar goals as Graham – SE – 2.3 reported:

> *When it comes to other products and services, if there is a choice then I would go to whoever it is that offers the best value-match in terms of what our aspirations are and their price, so we tip our business to [name of a power company] because [name of the power company] was in carboNZero program they have moved from carboNZero the same as which is the one that just measures we have stayed with them but if you know [name of another power company] decided to go in to the carboNZero program we seriously look at going to them. [Graham – SE – 2.3]*

Likewise, George - SE - 2.5 reported the same notion. However, in his opinion, their choices as a small business do not have a considerable impact on businesses around them and they cannot exclude their partners based on their environmental commitments and practices.

> *Things like we use a power generation company that use 100 percent from renewable resources we switched from the other power company to achieve that because now we can say that all the electricity we use at the winery is completely carboNZero and completely from renewable resources… we are a small business and it would be nice to align yourself with companies that had those sort of philosophies and in a lot of the cases we do that, some of our importers have strong environmental statements and philosophies you know that is really nice! But to exclude some on those bases at this stage is probably a little premature for us. [George - SE - 2.5]*

The findings suggest that the sustainability-driven entrepreneurs, as trailblazers for their new practices, initiate demand for other organizations and institutions in their business environment. Moreover, they support organizations that have the same philosophy in their businesses, which consequently expands their network and establishes a consistent demand for entities that provide the required logistics for their actions. This process also expands their activities to associated socio-technical systems such as energy and water. With a growing population of businesses adopting new practices, the sustainability-driven entrepreneurs facilitate collective actions for the wider influence of their practices, as explained in the following theme.

6.3.2.2.4 Forming New Institutions

The findings demonstrate that among different innovative practices initiated by the sustainability-driven entrepreneurs in the wine industry of New Zealand, organics has found wider acceptance among producers and consumers. Half of the sustainability-driven entrepreneurs (3 out of 6 SD - 10 Codes) reported that once there was a bigger

population, organic producers commenced a collective action under the umbrella of the Organics Aotearoa New Zealand (OANZ) association, to form a national organization supporting organic wine producers as also discussed in Section 6.3.2.1.3. This became possible when government funding, in support of organic production, came to be available (Organic NZ, 2007). The participants declared that the formation of the new entity would give organic producers a voice among other groups in the industry. It enhances the recognition of organic production among other well-established approaches. For example, Bruce – SE – 4 reported:

> *There were a number of reasons behind that but one of the reasons was trying to get a voice and recognition that organic people, farming organically, were actually in the vanguard of setting the quality parameters for the New Zealand wine industry. [Bruce - SE - 2.4]*

Besides finding a voice among other established groups in the wine industry, the growing population of organic producers was another important factor in the formation of this new entity. Like Bruce - SE - 2.4, Adam - SE - 2.6 emphasizes the credit that this collective entity may bring for organic producers:

> *I think it was population and it was a story that needed to be told, that needed some administration. [Adam – SE – 2.6]*

The participants reported that sustainability-driven entrepreneurs facilitated the formation of OWNZ. George - SE - 2.5, who is considered as one of the pioneer organic and biodynamic entrepreneurs in New Zealand, answered to the question if he had any role in the formation of OWNZ:

> *I like to say that yes would be the short answer. I mean from the personal point of view, we were all there when OWNZ started… we were all there, we had [pioneer entrepreneur], and I, and [pioneer entrepreneur] when we started and we sat for our own party support. [George - SE - 2.5]*

Sustainability-driven entrepreneurs stepped in to start the new organization, in order to ask for support and create a collective entity at the population level for more recognition. Five of the participants involved in organic production reported that James Millton[19], one

[19] James Millton is the founder of the Millton Vineyards and Winery in Gisborne region. He is the first certified organic producer by BioGro in New Zealand, who gained the certification in 1989. He is also the first certified biodynamic producer by Demeter in southern hemisphere, who gained the certification in 2009 (Millton Vineyards and Winery, 2016).

of the first biodynamic and organic producers in this industry, had a vital role in the formation of OWNZ.

> *Clearly James has a much stronger influence in that and maintains strong involvement with it. [George - SE - 2.5]*

Sharon - OA – 11 who has been engaged with OWNZ since the formation and works as the national coordinator, reported how this organization initially formed:

> *It started in an unusual way actually, which is that the different organic growers had really been working a lot on their own in their own regions. They knew each other's and they were in contact but there is no collective organization and then for about three years there was something called the organic advisory program, it was a government funded initiative that was created by the labor government at the urging of the green party for organic industry throughout New Zealand to basically create services and local programs to help growers go organic … There was no organic wine organization at the time that take the initiative and fight for funding so I was essentially contracted by organics Aotera New Zealand (OANZ). I was contracted by OANZ to basically convene a meeting of the top organic wine growers in the country bringing them together in Wellington for a day and talk about founding an organization and that meeting was really successful we had people like James Milton there as well as other people or other executive committee today so some of the original pioneers in organic field [three of the sustainability-driven entrepreneurs in this research] and from the we started the organization really. [Sharon - OA – 11]*

The sustainability-driven entrepreneurs stood up for the advantages of their group and their collective goals. The strong commitment of the sustainability-driven entrepreneurs to their new approaches encourages them to promote their philosophies and speak up for this group. Strong support from sustainability-driven entrepreneurs influences the governing bodies in this industry to secure further resources. Moreover, the sustainability-driven entrepreneurs facilitate the interactions with other entities in the business environment. They search for recognition and legitimacy among other groups in their industry and try to define their boundaries with other networks. Sharon - OA – 11 and Walter - OA – 7 reported:

> *They [New Zealand Winegrowers] are quite supportive of our work now, but it took some time to get there and I think people have really been willing to speak up for organics and it is pretty important, they had really believed, you have to really believe in what you are doing to be a pioneer*

Gisborne is a wine region located in the most easterly tip of New Zealand's north island. This region is well known for full flavored aromatic wine (Gisborne Wine New Zealand, 2016).

> *and then people continue to vocally tell everyone else around us, you know, that they believe [in] what they are doing. [Sharon - OA – 11]*

> *I think they have a great knowledge and experience and influence when it comes to that lobbying and trying to get things, maybe, done easier or fairer or move some of the misconceptions about what organics and biodynamics are. [Walter - OA – 7]*

Half of the participants (9 out of 18 AP – 19 Codes) discussed the lobbying power of the new organization (OWNZ). They reported that one of the main concerns in the wine industry is the lack of regulation for boundary management, which organic growers have tried to address through OWNZ. Moreover, in New Zealand, there is currently no restrictive regulation on organic labeling (Gulliver, 2015). No legislation requires companies to apply for third-party certification, even when they claim they work under organic practices. This notion concerned the participants about green washing, which may affect the validity of the whole organic philosophy. The participants discussed that the new entity, by its collective power, may facilitate the lobbying process for changing regulations.

> *In terms of New Zealand regulations, the biggest one is that there is a new effort starting this year. I think, through Organic Aotearoa New Zealand, to regulate the use of the term 'Organic' in New Zealand. Because right now, most people, who said they are organic in New Zealand, are certified, but there is no law that asks them to be certified… we have seen a handful of people making false organic claims in the wine industry. Like saying they are organic and they are not actually! They are not certified! They might be farming organically but how do we know, if they are not certified we [OWNZ] are absolutely backing this effort to get the term organic regulated. [Sharon - OA – 11]*

Besides lobbying, the majority of the participants (12 out of 18 AP – 27 Codes) mentioned creating knowledge and information sharing as some of the main roles for OWNZ. As discussed in Section 6.3.2.1.3, OWNZ facilitates considerably the learning process at industry level. In addition, the new organization shares knowledge through formal conduits such as seminars, field days (agricultural shows), and publications. This might have been influenced by sharing and a cooperative environment in the wine industry and, similar patterns on other aspects such as Sustainability Wine New Zealand, which they tend to have seminars on and facilitate information sharing among companies in this industry. Adam - SE - 2.6 reported that OWNZ has inspired many vineyards throughout New Zealand to convert to organic practices. He claims that information sharing during field days and organic focus vineyards were crucial for this encouragement:

> *[OWNZ] inspired a lot of other vineyards throughout New Zealand to join this Organic New Zealand Winegrowers movement, that has field days and information sharing and model vineyards in three different regions. [Adam – SE – 2.6]*

The new organization makes available resources to conduct research and development projects such as the Organic Focus Vineyard Project as explained in Section 6.3.2.1.3. Sharon – OA – 11 reported that results and findings from such projects are documented and shared via diverse channels including organizational websites, research reports, and newsletters (OWNZ, 2016). She stated:

> *If you look, we have a website – organicfocusvineyard.com. … We have got three focus vineyards in three different regions, the vineyard managers write regular blogs on there about what is happening in their vineyards and with the idea of… providing information to others. [Sharon - OA – 11]*

This process makes the knowledge of new practices available in a more formal and systematic way for wider audiences and expands the horizon of information sharing from local networks of sustainability-driven entrepreneurs to regions, across regions, and at a national level. Walter - OA – 7 reported:

> *I guess I can talk to the winery about some of the management issues, but from a practical grape growing point of view, then the information that is shared among the regions generally gets to the other regions either osmotically because you tend to mix it at some point or through more direct processes. [Walter - OA – 7]*

The findings suggest that the sustainability-driven entrepreneurs in this research facilitate collective action among the population adopting their new practices. They participate to form new entities and create an identity for their growing population. Such new entities enable them to ask for more resources and support. They also empower the entrepreneurs to influence regulations in their industry. Moreover, the new organizations facilitate information sharing through more formal conduits and across different regions. Formal information sharing and research projects may expand the network across regions and at the national level. Some of these sustainability-driven entrepreneurs also learn and revise their work based on what they can see from the outputs of research. While this collective action justifies organic producers as legitimate and influential within the wine industry, the sustainability-driven entrepreneurs also form co-operative groups to influence consumers, as discussed next.

6.3.2.2.5 Cooperative Marketing

An emerging theme from the data shows that by the growing number of organic producers, they may seek even more ambitious goals. The majority of the sustainability-driven entrepreneurs (4 out of 6 SD – 11 Codes) reported that a bigger population of organic producers might bring together more resources to act collectively and inform consumers about their communal goals through their cooperative marketing strategies. The sustainability-driven entrepreneurs form collaborative groups to share resources and tell their stories through their collective marketing. They publicize their activities in mass media to attract attention and inform consumers about their emerging niche. Some of the sustainability-driven entrepreneurs formed a cooperative marketing group in Marlborough to boost their profile. Bruce - SE - 2.4 and Susan – SE – 2.2 reported that this cooperative group aims to create an alternative image for the Marlborough region, which is currently dominated by large-scale companies focused on volume:

> *[Name of the cooperative] is a Marlborough organization, and the basis of [name of the cooperative] is to be able to give an alternative image of the Marlborough region. It is dominated by the larger cooperating from the pure volume point of view... So the aim of [name of the cooperative] is to be able to say that, you know, there are focused artisan minded wine producers and one of the definitions of that was: we farmed organically and had our own wineries. [Bruce - SE - 2.4]*

> *We also put money into a pot and bring media, trade those and we show them the artisan side of Marlborough, with all of us, we share the two days and do many nice things with them. [Susan – SE – 2.2]*

Likewise, new collective organizations such as OWNZ, plans to boost the profile for organic growing in public opinion. They wish to raise consumers' awareness about organic viticulture by organizing more focused advertisements and activities on organic production. Sharon - OA – 11 reported:

> *Yeah! That is something that we have not focused a lot on in the past. We were much focused on just helping growers convert so that we could get a critical mass of organic growers and now that we have more organic growers and we are still trying to help more convert, but now there is more of them. We really are looking to increase our public profile collectively. I mean all the individual wineries have been doing their own marketing but now we are realizing that it is really time for us to get a collective message about organic and biodynamic wine with someone who is more of a marketing professional now to help us; yeah, organize some events and some communications to help consumers understand what organic wines are all about. [Sharon - OA – 11]*

The majority of the participants (10 out of 18 AP – 22 Codes) discussed that competitions and awards act as assessment tools for green businesses. Success in these competitions may evaluate them among other environmentally-friendly businesses and bring them a marketing tool or leverage to claim more acceptance among consumers. The sustainability-driven entrepreneurs explained that they try to communicate with the market audience and promote their wine and philosophies through green awards and certification. Chris - SE - 2.1 explained how he uses green awards and competitions to publicize his achievements:

> *We have spent a bit of time and effort and are trying to publicize our achievements and we do that by entering green competitions. [Chris – SE – 2.1]*

Bruce - SE - 2.4 shares the same opinion with regards to wine writers and sommeliers. However, he explained that the audience of wine writers and sommeliers might be quite different from those of awards. In his opinion consumers of premium wines are more interested in wine writers' reviews and sommeliers:

> *I think so, depending on your outlook, the label, a gold label on a wine on a shelf has got a certain value but to have commentary by recognized wine writers is very valuable. If your market is discerning consumers, sommeliers, most of the time, would be put off by awards. [Bruce - SE - 2.4]*

The findings suggest that while individual sustainability-driven entrepreneurs do not have enough resources to influence the market as a whole, they engage in collective actions, cooperate, and share resources to inform consumers about their new practices. Such actions may differentiate these producers from other trends in their industry and shape a new identity for them by enhancing their recognition among consumers. Additionally, the resulting new entities, such as OWNZ, also employ strategies to promote their philosophies in their targeted market by more focused marketing.

6.3.2.2.6 SUMMARY

This section explains the roles and strategies that the sustainability-driven entrepreneurs employ to legitimize their actions and create supporting institutions in their business environment to form their niche. It shows that sustainability-driven entrepreneurs use their social network to introduce their new practices to other actors in their socio-technical system through informal interactions. The findings demonstrate that the sustainability-driven entrepreneurs aim to be identified as practical examples of their methods and inspire other people by role-modeling their new practices. The good quality

of their products and good reputation in the market may facilitate this process by establishing trust among other actors (Mann, Ferjani, & Reissig, 2012; Mollá-Bauzá, Martinez-Carrasco, Martínez-Poveda, & Pérez, 2005). Moreover, they discuss creating demand for other supporting institutions such as third-party certifiers, which are not equipped to address their needs at early stages of their work. By their request, these supporting organizations would be able to allocate more resources to their specific industry and develop the required knowledge and procedures. If their new practices are adopted by wider actors, they could form bigger populations and develop collective actions. The sustainability-driven entrepreneurs would become institutional entrepreneurs and facilitate the formation of new entities, representing their population. Through this collective entity, they will pursue their goals at the industry level. They share information through more formal conduits, which also expands their networks and diffuses the knowledge across different wine regions. The new organization, as a representative of their population, facilitates their negotiations with other entities at industry level and establishes an identity for them, which enables them to lobby and demand more support. They also form cooperative groups to introduce their philosophies in the market and among consumers. Beside learning and networking, the participants in this case study discuss sustainability-driven entrepreneurs' roles in articulating and creating a dominant design[20] (an institutionalized approach) for their new practices. This notion is discussed in the following section.

6.3.2.3 Roles and Strategies for Articulation

The findings show that articulating a clear definition of new practices is an important factor for their wider influence at different stages of evolution. The sustainability-driven entrepreneurs play a crucial role to maintaining what is especial about their new practices and create a common understanding about their new approaches. Finding a dominant design makes it easier for other organizations to learn and imitate the new approaches. The findings in this section are presented in three main themes: (1) converging to a dominant design among pioneers; (2) offering vision and support for collective efforts of the population; and (3) setting standards; as presented in the following sections.

[20] Dominant design has been defined as "an agreed-upon architecture and set of components constituting a product or service" (Aldrich & Ruef, 2006, p. 189).

6.3.2.3.1 Converging to a Dominant Design for New Practices Among Pioneers

Informal communication between the sustainability-driven entrepreneurs, who are considered pioneers, may help them reach a consensus about their new practices. They share information and solve problems in a cooperative manner in order to save resources, while finding a common ground for further improvements. Adam - SE - 2.6 reported this attitude towards information sharing:

> *There is something that we are used to doing, it is sharing information with other vineyard owners, if we got some issues... It saves a huge amount of time and efforts and cost and then we've informed other people... [about] successes and mistakes [Adam – SE – 2.6]*

This process of information sharing and informing each other about success and mistakes converges the design among these entrepreneurs. Finding a dominant design among the entrepreneurs who are considered pioneers eases the process of learning for later adopters as they have to understand one nominated design instead of getting confused among many variations. Creating a consensus among a population of organizations may need more formal activities. This notion takes place through entities such as OWNZ, as discussed in the following theme.

6.3.2.3.2 Creating Vision and Support for Collective Actions

The sustainability-driven entrepreneurs contribute to the initiation of collective actions, related to their new practices in their industry, as discussed in Section 6.3.2.2.4. In addition, half of the participants (9 out of 18 AP – 14 Codes) reported that the sustainability-driven entrepreneurs also may drive these collective actions. The participants reported that the more passionate and proactive sustainability-driven entrepreneurs may provide vision and direction for further improvements of the new organization. For example, Sharon - OA – 11, who is the national coordinator for OWNZ and has been involved in this organization since the formation, shared her expert opinion about the role of the sustainability-driven entrepreneurs regarding this as follows:

> *People like [a sustainability-driven entrepreneur], they really provide, sort of, the vision and leadership and a voice, I guess, for organics. They generate ideas for what we need to do. [Sharon - OA – 11]*

Support and leadership from the sustainability-driven entrepreneurs gives direction to collective actions and creates a consensus among actors about organic production. Although, as it has been discussed in Section 6.3.2.2.2, the degree of engagements for the

entrepreneurs may change based on their available resources in various stages of development. Moreover, every entrepreneur is different and they may take different pathways based on their personal preferences and broader objectives. Hence the findings cannot be generalized into all sustainability-driven entrepreneurs. The findings show that the sustainability-driven entrepreneurs may also get involved to set standards and clarify the boundaries for their new practices, as discussed in the following theme.

6.3.2.3.3 Setting Standards

One of the other participants reported that some of the sustainability-driven entrepreneurs may get involved in setting standards related to their industry. Blair - OA – 4, who initially wrote the standards for a third-party authority in New Zealand (BioGro, 2012a), reported that some of the proactive sustainability-driven entrepreneurs were the motivation in writing the organic standards specific to the wine industry in New Zealand (Biogro, 2012b). He explained:

> *I wrote the [third-party certifier] standards, and the 'Winegrowers' was a module of that. The energy and inspiration came from [a sustainability-driven entrepreneur], he is the one who drove it and some of the other winegrowers. [Blair - OA – 4]*

He thinks that sustainability-driven entrepreneurs may watch the quality of the movement and assure its compatibility with the initial philosophy of the goal. He described them as knowledgeable and passionate people in their field, who get involved in setting standards and define clear boundaries for the legitimate new practices. Yet, similar to the previous theme, this finding is very influenced by personality of entrepreneurs and other situational conditions subjected to local settings, hence it cannot be generalized to the population of sustainability-driven entrepreneurs.

6.3.2.3.4 Summary

This section discusses the strategies that the sustainability-driven entrepreneurs employ to form consensus on their new practices with other actors and organizations. It is shown that informal information sharing among entrepreneurs and solving problems in a cooperative way help the sustainability-driven entrepreneurs to reach a common understanding about their new practices. At the collective level, some of the sustainability-driven entrepreneurs, who are passionate and proactive, may create visions and directions for their population. They may get involved to set standards specific to their industries, and clarify the boundaries for their new practices. These activities enhance the

legitimacy of their model and clarify its differences from other trends. It creates their identity among other groups in their industries. Yet this reactiveness is subjected to entrepreneurs' personalities and various situational conditions, and, hence may not be generalizable to a bigger population of sustainability-driven entrepreneurs. Despite all the effort that sustainability-driven entrepreneurs put into practice, the success of their strategies are highly dependent to socio-economic factors in their sectors, as discussed in the following section.

6.3.3 Key Socio-economic Factors Influencing Entrepreneurial Actions

This section explains how socio-economic factors influence the wider effects of entrepreneurial actions in the wine industry. The participants reported that the green and clean image of New Zealand, and general awareness about environmental problems among different actors involved in the situation, increase the chance for adoption of more socially- and environmentally-friendly practices. However, factors such as (1) financial gain and initial capital outlay; (2) degree of newness; (3) relevance to the quality of products; (4) legitimacy and transparency of third-party authorities; and (5) policies in support of current trends or new practices, influence the popularity of them. These factors are discussed in the following themes.

6.3.3.1 Financial Gain and Initial Capital Outlay

The majority of the sustainability-driven entrepreneurs (4 out of 6 SE – 10 Codes) reported that financial gain was the most important factor in selection of new practices. A crucial criterion, which influences the decisions of other companies, is to realize that by adopting new practices, their financial performances would improve. Innovative practices that clearly result in financial gain, by enhancing performance or addressing market opportunities, may be automatically adopted by other actors. Chris - SE - 2.1 reported about one of his projects that other people are picking up on because of its financial benefits.

> *I also take the waste from the agriculture industry… I compost that and put that back into the vineyard, so it reduces the reliance on buying other nutrients and fertilizers… that is just utilizing something that is in the waste stream and that works extremely well, and in fact, since I have started, there are others looking at doing it and they are picking up on that as well. [Chris – SE – 2.1]*

Likewise, the participants reported that capital outlays for many of the changes might hamper the adoption of new practices. When Return on Investment (ROI) of new methods does not meet the market expectations (for example, usage of solar panels for producing electricity was mentioned by one of the sustainability-driven entrepreneurs), some of the sustainability-driven entrepreneurs and followers may hesitate to employ those practices. Moreover, the participants reported that the initial cost of buying different machinery for organic production, which is essential for some of the changes, might be a big obstacle for many companies to become organic.

> *It does require different technologies and really different approaches in the vineyard. It is not just about swapping one chemical for another. Under vine weeding is probably the biggest deal for a lot of people that are converting, because you need a totally different piece of machinery which can be quite expensive and you need to work out how to use it at the right time and in the right ways. [Sharon - OA – 11]*

The findings show that certainty about the financial return of new practices is the most crucial factor for adoption of new practices. Sustainability-driven entrepreneurs initiate their businesses driven by their personal philosophies, and may work with lower financial performance. However, other actors have to get positive feedback about the financial aspects of new practices to consider them as legitimate choices. New practices that improve the financial performance might be easily adopted by other actors. Besides financial gain, the participants differentiated between practices based on their departure from current norms and trends in the industry, as discussed in the following theme.

6.3.3.2 Degree of Newness

Criteria such as philosophies behind new practices and degree of newness may affect the decision of other companies. Half of the participants (9 out of 18 AP – 30 Codes) reported that the further the distance between current norms and the philosophies behind new practices, the more difficult for it to be adopted by other actors. Different criteria for evaluation, which are based on the dominant norms in the industry, may disqualify some of the innovative activities.

> *I think the mass are science-based [based on modern agriculture and technology], and I am not sure they [organic and biodynamic producers] are or not science-based! You know, they [organic and biodynamic producers] have different motivations for being part of this group. It is not all scientific, where these groups are pretty much scientific; they want proof or otherwise they don't want to do it just for the benefit of the greater good. [Isaac - OA – 9]*

The subjective meaning of 'knowledge' among actors and what they take for granted as the logical way of organizing, makes it difficult to adopt practices that majorly depart from these norms. Organic and biodynamic practices in New Zealand's wine industry both commenced many years ago. However, only a handful of companies are biodynamic-certified, while 27 are fully organic-certified and 16 are in conversion (NZW, 2015a). The participants reported that the philosophical assumptions of biodynamic practices are very different from current trends and do not fit to the knowledge and social norms of their business environment. Consequently, less people would understand the concept and fewer experts and human resources would be available. Hence, biodynamic producers may find less support and acceptance among other organizations.

> *Part of being biodynamic is to have a process inside you that makes you study something that you don't know yet. [Nigel - OA – 6]*

Bruce - SE - 2.4, who is representing a biodynamic producer, shared the same opinion. He thinks understanding biodynamic philosophies and practices could be quite difficult for the people who are used to using with conventional methods.

> *I think we are probably, in some ways, less relevant to people who are beginning their path-way into organic farming. So the things that we do are a little bit hard to digest for someone who is coming straight from a chemical approach. [Bruce - SE - 2.4]*

The findings show that the degree of departure of new practices from the norm influences the acceptance of them among other stakeholders and actors in the business environment. More learning is required and more positive feedback should be experienced by the actors for them to consider these practices as legitimate alternatives for their current approaches. Moreover, the participants discussed that practices that may result in better quality of products are easier to be accepted by other actors. This is discussed in the following theme.

6.3.3.3 Relevance to the Quality of the Product

Almost third of the participants (7 out of 18 AP - 19 Codes) reported that the selection of wine by customers is mainly based on the quality of the product and reputation of the brands. Environmental characteristics of wine do not necessarily influence the decision of consumers. For example, Graham – SE – 2.3 reported:

> *Certainly up to now there has been no evidence to show that the people who buy wine have conscious concerns that they would prefer something that it was made CarboNZero or sustainable or whatever. [Graham – SE – 2.3]*

However, the participants also reported that the influence of some of the practices on the quality of wine facilitates the decision of companies to adopt such practices (Forbes et al., 2009; Padel, 2001; Pimentel et al., 2005). More than half of the participants (10 out of 18 AP – 25 Codes) discussed that the quality of organic and biodynamic products, compared to other methods, can influence their market. The participants discussed the strong relation between land (environment) and farmers in organic and biodynamic practices, which in the end may result in a better-quality wine. They believe organic and biodynamic wines reflect the characteristics of the place and emphasize a sense of individuality of the place of production. Alastair – OA – 2.1 explained:

> *I think that made them better vineyard operators, that is, possibly, why you can see the quality of some organic vineyards are better, because of the way, which people who are doing the work on the ground see their roles which has beneficial effects in others way as well. [Alastair – OA – 2.1]*

On the other hand, the participants debated the irrelevance of the concept of the carboNZero certification to the quality of wine. They discussed that while organic and biodynamic may result in a better quality product, carboNZero products do not translate the same impressions (Gadema & Oglethorpe, 2011; Hornibrook, May, & Fearne, 2015) and consumers as self-aware individuals may decide to choose products that have health benefits for them (Röös & Tjärnemo, 2011). They reported that this irrelevance might influence the popularity of this certification. Yet, some literature offers a contradictory perspective (Shewmake, Okrent, Thabrew, & Vandenbergh, 2015). Walter – OA – 7 reported his opinion:

> *You know people are generally selfish and self-aware, and I think organic must be better for me or should be better for me you know there is a point here about the environment, carboNZero is not about the consumers. [Walter - OA – 7]*

This sense of quality and having other beneficial health characteristics can be a reason for wine consumers to choose from organic and biodynamic products (Padel, 2001; Pimentel et al., 2005). Having a higher quality product may consequently influence the reputation of producers and may result in a more stable market position for those producers. It also associates practices such as organic and biodynamic growing with higher-quality wines.

Hence, successful vineyards with good reputations and organic and biodynamic practices may find more acceptance among consumers, and influence the decisions of other organizations by this credit. Moreover, the participants discussed that their market could be affected by legitimacy and transparency of relevant organizations such as third-party authorities, as discussed in the following theme.

6.3.3.4 Legitimacy and Transparency of Third-Party Authorities

Almost half of the participants (8 out of 18 AP – 20 Codes) discussed that having a more legitimate and well-known third-party certification may foster the approval of new practices among producers and consumers. It develops a sense of trust among consumers about new practices and enhances the market position for organizations adopting those practices. For example, Sharon - OA – 11 reported:

> *I think organic is the most well-known environmental certification brand internationally, organic is recognized in every country and there is a reason for that, there are very clear standards and it is a very widely practiced way of growing, so I think for people who want to make the lead to, you know, getting serious about taking care of the environment on their property, that organic is sort of the first, the natural choice. [Sharon - OA – 11]*

Craig – OA – 2.3 explained that more legitimate standards and certifications enabled businesses to be legally recognized as environmentally-friendly producers in different international markets. Moreover, it helps them understand what the expectations, are in different markets and how they can improve their practices to meet those prospects. It also assures consumers that certified products meet a certain level or standard.

> *I think one of the things that you need to be aware of with organic certification is that it is not just enforcing the rules but it is also assisting producers to understand consumers' expectation of organic products, so in other words, certification is really the interface between the producers and the consumers. So certification has to be trusted by the consumers, so if they see a [name of a certifier], of a product they know, they can trust [it]. [Craig – OA – 2.3]*

For example, the organic certification is supported by intergovernmental agreement (Kristiansen & Merfield, 2006), which regulates and standardizes the certification in different international markets, and adds to the legitimacy of this certification compared to others (Darnall, Ji, & Vázquez-Brust, 2016; Reinecke, Manning, & Von Hagen, 2012).

> *For many of the markets there is what called an official organic insurance program which is the government to government guarantee system. [Craig – OA – 2.3]*

On the other hand, the certifying organization for biodynamic practices is not supported by the same rules. The participants reported the biodynamic certifier to be a well-known international organization, however, the absence of back-up legislation that supports the legitimacy of its accreditation in the international market, hampers the wider acceptance of it. Bruce - SE - 2.4 who is a biodynamic producer reported:

> *I think some of the biodynamic producers are expecting that through [name of a certifier] certification they can get more market access overseas, but that is not the case. The costs to get equivalent between government and government organization do not work. So you know, I think we need to work very hard to export [name of a certifier] certified wine out of NZ. [Bruce - SE - 2.4]*

Moreover, one of the early adopters discussed the expensive process of certification. He reported that the financial cost for the audit and certification for organic production may not be feasible for small scale producers. Hence, some companies may work under organic rules but do not necessary apply for certification. This may hamper the acceptance of this certification among smaller producers and result in inconsistency in the organic market. Andrew – OA – 2.2 reported:

> *We have not sort organic certification simply because actually it is very expensive to do that. [Andrew – OA – 2.2]*

The certification for carboNZero practices was initiated after organics and biodynamics. The participants reported that one of the obstacles facing broader adoption of carboNZero in the wine industry is the lack of transparency in the certification process (Röös & Tjärnemo, 2011; Wu, Low, Xia, & Zuo, 2014), which influences the level of trust among actors dealing with this certification. Lack of transparency and concerns around the financial aspects of buying carbon credits worried some of the participants. Lack of recognition among consumers could be another reason that has influenced the slow adoption of carboNZero certification among other organizations. The participants discussed that consumers do not have a clear understanding about the carboNZero certification. Adam – SE – 2.6 and Walter - OA – 7 reported:

> *We looked into carboNZero programs when they first started becoming available, and didn't really like the idea of robbing Peter to pay Paul. If you take a very sensitive approach yourself, you can do everything that you know carboNZero plan is going to achieve. [Adam – SE – 2.6]*

> *Public conception of being organic and carboNZero are quite different as well (probably people don't know about carboNZero at all?) I think if they know about it, whether they fully understand it or not, [they'll] really see the value of it. [Walter - OA – 7]*

The same issue was discussed for green competitions and awards. Isaac - OA – 9] discussed that the complexity of green awards and their diversity may cause confusion among consumers and lower the level of understanding. Moreover, unclear criteria for some of these awards and competitions affect the validity of them.

> *I mean within the NZ wine awards, there is pure gold and I guess a pure silver and pure bronze… it is about making it meaningful and true and pure gold sounds nice but if you can't kind of work out what you are giving it for, because it's kind of quite potentially complex stuff. You say pure gold. Oh! That sounds nice. Oh! What is that? I don't know! [Isaac - OA – 9]*

Sustainability-driven entrepreneurs employ third-party certification and green awards to create trust and introduce their new practices to wider audiences. However, the influence of their actions is dependent on the legitimacy and transparency of these authorities. The more legitimate and transparent the authorities are, the more convincing their certification would be. The participants also discussed the supporting policies in their industry, which may stabilize the current trends or promote new practices. This notion is discussed in the following theme.

6.3.3.5 Policies in Support of Current Trends or New Practices

Some of the participants (6 out of 18 AP – 20 Codes) discussed the sustainability program in their industry and how it overlaps with other certification such as organic and biodynamic. They discussed that more integrated policies may lead to better results and a more unified industry in the future. These participants reported that support from NWG in promoting the Sustainability Wine New Zealand program by creating applications and passing regulations, may push other environmentally-friendly practices out of the mainstream action. Regulations, imposed by NWG, enforce all wine producers in New Zealand to apply for Sustainability Wine New Zealand certification, which may distribute resources among different streams in the industry. For example, Bruce - SE - 2.4 and Susan – SE – 2.2 reported:

> *The future really is that all of these [all trends such sustainability, organic, and biodynamic] are together. I think that is something we should always be really conscious of, what we don't want to*

> *have is separate streams within the industry. I think you want to be seen as a solid and joint wine industry. [Bruce - SE - 2.4]*

> *At this stage, they [Sustainability Wine New Zealand program] didn't work very well with [a third-party certifier] which is the major NZ organic and biodynamic auditor. The wine NZ program has put a lot of resources and effort in to this sustainability program at this stage. The [third-party certification] is more of a competition than a benefit but hopefully as we go along that dissonance would disappear, the Sustainability Wine New Zealand may want to be working with [a third-party certifier] and they can both benefit, but at this stage it is a separate entity. [Susan – SE – 2.2]*

On the other hand, the participants discussed the funding in support of organic agriculture. They reported that when organic agriculture found a certain level of legitimacy among different stakeholders, the support from government by securing funding enabled the actors involved in such practices to pursue their goals in a more formal way and helped them to form OWNZ. Sharon - OA – 11 reported:

> *…For a few years, for about three years, there was something called the organic advisory program; it was a government-funded initiative that was created by the labor government at the urging of the green party. Well, really, it was part of the deal with the green party to happen and they secured three years of funding for organic industry throughout New Zealand to basically create services and local programs to help growers go organic and I was working on a number of different programs through the organic advisory program and the program really wanted to put some seed funding into the wine industry, but there was no organic wine organization at the time to take the initiative and fight for funding, so I was essentially contracted by organics Aotera New Zealand (OANZ), I was contracted by OANZ to basically convene a meeting of the top Organic Winegrowers in the country. [Sharon - OA – 11]*

The participants discussed that while policies from governing bodies, in support of a sustainability program, are beneficial for the industry to define a bottom-line standard for production, they may stabilize the current trends and create a struggle among actors to change their mindset and choose from new practices that have major departures from current norms. On the other hand, the participants discussed the support for organic production, which enables organic producers to scale up their efforts and form new entities to pursue their goals at the population level. The participants claimed that more inclusive policies may have better results for the industry and different streams within it.

6.3.3.6 SUMMARY

This theme of results discussed socio-economic factors that influence the entrepreneurial strategies for wider impacts. The findings in this case study show new practices that

eventually have financial gain are easier to be accepted by other organizations. Nevertheless, factors such as initial capital and the long-term cost-benefit of new methods may influence the decision of companies to adopt new practices. The findings show that acceptance of new methods that may not necessarily lead to financial gain, are more complicated. It was also shown that new practices which have major departures from current philosophies and knowledge in the industry, are more difficult to be accepted by other organizations. These practices may lose connections with dominant trends and networks and lose access to resources. Moreover, the findings show that entrepreneurial strategies are highly influenced by the legitimacy and transparency of the third-party authorities. Authorities that are backed-up by regulations and have transparent procedures and outcomes would become more popular among consumers and other actors. Hence, using those certifications creates more legitimacy for the entrepreneurs and their practices. On the other hand, the findings show that new practices that directly improve the quality of products attract more attention among consumers. They associate new practices with higher-quality products and it creates a better reputation for companies employing those practices. It was discussed that different directions of policies and investments may either stabilize the current norms and create obstacles for breakthrough of new practices, or open up windows of opportunity, where they can scale up their efforts at higher levels in their industry. Hence, the participants discussed that more comprehensive policies are required to acknowledge different streams in the industry. The participants discussed different actor groups' influence in the processes explained earlier. These actor groups are discussed in more detail in the following section.

6.3.4 The Actor Groups in Sustainability-Driven Entrepreneurship Processes

The participants discussed other actors in their business environment. Considering the earlier-mentioned themes, they explained how these individuals and organizations help them achieve their goals or facilitate their actions. Table 6-11 identifies the actors and explains how they are important for the entrepreneurs. This presentation is subject to influence by the entrepreneurs' point of view, as the main focus of the research and starting point for the data collection.

Table 6-11 Networks of the sustainability-driven entrepreneurs in this case study

Actor	Categories	Role/Related to a resource/Influence	Themes*
Businesses	Business alliance/competitors	• Observing and learning from new practices • Adopting new practices • Cooperation in learning and information sharing • Collective actions	7
Organic Winegrowers New Zealand (OWNZ)	Organic trade association	• Organizing collective action for organic producers • Research and development for organic production • Formal information sharing for organic production • Promoting the organic concept among consumers	3
Customers	Consumers	• Weak ties between • producers and customers • Buying environmentally-friendly wines	2
Distributors			
New Zealand Winegrowers (NZWG)	Governance	• Supporting and running the Sustainable Winegrowing New Zealand industry initiative • Organizing collective actions across the industry • Representing New Zealand wine industry in international markets • Governance and regulation • Support the formation of OWNZ • Lobbying for organic production at higher levels	2
Ministry of Primary Industries			
Organics Aotearoa New Zealand (OANZ)			
Third-party certifiers	Supporting institutions	• Building trust and legitimizing new practices • Access to wider audiences	2
Wine writers and sommeliers			
Green competitions and awards			

* The number of themes which entrepreneurs referred to this particular type of actors

The table demonstrates how different groups of stakeholders help sustainability-driven entrepreneurs to achieve their goals. As it can be concluded from the table, that a large number of themes are related to business group stakeholders. This demonstrates that

interactions of sustainability-driven entrepreneurs in the wine industry and their strategies are inclined towards this group as the most important stakeholder in the legitimization of their actions. The following section summarizes the earlier discussions and concludes the discussion about the wine industry in New Zealand.

6.4 CONCLUSION

This chapter examines the sustainability-driven entrepreneurs in the wine industry of New Zealand, categorized into three groups of (1) organic, (2) biodynamic, and (3) carboNZero-certified. The chapter started with an overview of the wine industry and the main environmental problems within this industry. It discussed the sustainability-driven entrepreneurs' backgrounds and intentions, and explained how different strategies are employed by these entrepreneurs to legitimize their actions and find wider influences. The chapter ended by discussing key influential factors on the entrepreneurial roles and strategies, and introduced the actors who were identified as important in the earlier-mentioned themes. This section summarizes the findings and presents them in an integrated way by conceptualizing them in the theoretical frameworks in this research.

It was discussed that the wine industry in New Zealand is younger than other production regions in the world and has a small share of the wine production in international markets. However, this industry has built a reputation for producing high-quality wine especially in varieties such as Sauvignon Blanc and Pinot Noir. The industry is very reliant on the international market and the reputation of New Zealand as a green and clean country offers a competitive advantage for exporters to those markets. Thus, actors in this industry are keen to maintain and enhance this advantage over their competitors in international markets.

It was shown that the wine industry in New Zealand is working based on a regional structure. There are strong ties among the actors and companies in one region, which advance the level of trust among actors in those regions. This notion enhances the collaborative environment in the industry for activities such as marketing and information sharing. The above-mentioned characteristics create both opportunities and threats for dominant regimes and new niches interacting in this industry as shown in Table 6-12.

Table 6-12 Landscape characteristics of the wine industry in New Zealand

	Characteristics	Consequences
1	Reliant on international market and the clean and green image of New Zealand as a competitive advantage	Encourage actors in this industry to maintain and enhance the clean and green image
2	Regional structure	Actors are interconnected through stronger ties, which may consequently create more trust and result in a collaborative environment

Furthermore, it was shown that the wine industry has been criticized for creating environmental degradation. Issues such as inappropriate use of chemicals, land use, quantity and quality of water used and waste in the processes of production, impact on ecosystems, organic and non-organic solid waste, and energy use and carbon emission. These have raised concerns among different stakeholder groups in the industry and among consumers. Different actors have taken action to address the concerns. These actions can be categorized as top-down approaches, such as the Sustainability Wine New Zealand program, or proactive emergent practices, such as organic, biodynamic, and carboNZero-certified practices employed by proactive entrepreneurs that are the focus of this research. Table 6-13 summarizes the externalities created by the dominant regimes and shows how they are addressed by different approaches.

Table 6-13 Externalities of dominant regimes and different strategies employed by stakeholders to address them

Dominant regimes	Externalities	Approaches employed to address externalities
Developed based on chemical agriculture and maximum output	• Inappropriate use of chemicals • Land use issues • Quantity and quality of water • Impact on ecosystems • Organic and non-organic solid waste • Energy use and carbon emission	Sustainability Wine New Zealand as a top-down regulative approach
		Proactive entrepreneurs employing environmentally-friendly practices such as: • Organic • Biodynamic • carboNZero

This research is focused on proactive entrepreneurial actions, which introduce new practices in the wine industry. It was discussed that previous life experience of the sustainability-driven entrepreneurs had resulted in deep personal concerns about environmental trends in their industry and formed their intentions to find solutions for

those worries. Hence, they intentionally employ environmentally-friendly practices in their businesses, considering them as best solutions for their concerns. They may have looked or worked at similar organizations in other places in the world before starting their own companies, which brought about the initial knowledge about their new practices. This intention and knowledge from previous life experiences formed their enthusiasm to initiate their new practices in their business environment, where there is no similar example to with which to be associated. They employ proactive strategies and drive their employees to utilize innovative methods and think out of the box. Being passionate and enthusiastic about their new practices helps them to form new entities and address their environmental concerns through their businesses. The above-mentioned factors help them depart from current trends in their industry and become entrepreneurs, as summarized in Table 6-14.

Table 6-14 Backgrounds and intentions of entrepreneurs

Themes	Consequences
Life experience of sustainability-driven entrepreneurs	• Forming the intentions of sustainability-driven entrepreneurs to address their environmental concerns in their business • Willing to take risks and employing proactive strategies in their businesses • Driving their employees to move towards their goals • Initial knowledge for their new practices
Passionate about their environmental goals	
Being proactive and thinking out of the box towards their intentions	

The sustainability-driven entrepreneurs learn through a trial and error process to create robust models of their new practices. They did not have accurate definitions of their practices when they started. They learnt and built upon their initial knowledge. Conscious efforts of the sustainability-driven entrepreneurs for utilizing environmentally-friendly practices helped them create a better understanding about their businesses, which may support them incorporate sustainability rules into their companies. They improvised new solutions and shaped the haphazard information to create a schemata and a concrete model of their new practices. Their new practices are developed and shaped over time while being experienced in real situations and being revised based on feedback received from their environment. These concrete models create a base for changing the cognitive assumptions among other actors by developing legitimate alternative models for what is taken-for-granted in their sector. If other actors adopt these new practices and form

bigger populations, they might create new collective entities at the population level. The sustainability-driven entrepreneurs, as experienced and knowledgeable people, transfer their knowledge to new organizations. This knowledge would be captured and documented through formal channels, which consequently translate the tacit knowledge among entrepreneurs to written, implicit knowledge available for wider audiences. This availability of knowledge facilitates the imitation process for late movers.

While learning and creating legitimate models of new practices is important, sharing these models with other actors in the business environment is crucial for legitimization and creating a supportive environment. The sustainability-driven entrepreneurs are willing to be identified as models and solutions for their philosophies. They share knowledge in their informal relationships and within their personal networks to convince other people and find more acceptance among other actors in their business environment. Creating, legitimate models and acting as examples to convince other actors might initiate skepticism about the dominant trends, and attract attention from other actors who were initially not interested in these entrepreneurial activities. Feedback from their actions may enhance the double-loop-learning and bend the cognitive norms in their favor. Moreover, the enquiry of the sustainability-driven entrepreneurs may create demand and change the procedures in other organizations.

It was shown that other organizations, such as third-party authorities, are not equipped enough to address the needs for the new practices in the wine industry, or they did not exist at the time when these entrepreneurs started. Requests from the sustainability-driven entrepreneurs and some early adopters enabled them to bring more resources to the specific industry of the entrepreneurs and established the processes based on their needs. Should these new methods be accepted by other organizations in the industry, the population of these businesses would grow, and enable them to collectively target markets and promote their practices. Sustainability-driven entrepreneurs may act as institutional entrepreneurs, and facilitate collective actions to form new organizational entities such as OWNZ. Development of a new entity in a collective form enables them to bring about more resources to pursue their communal goals. This became possible when funding from government in support of organic production created windows of opportunities for organic producers to pursue their goals at the industry level. The new organization uses different tools such as newsletters, websites, blogs, seminars, and field

days to share knowledge in a more formal way. They also conduct local experiments, demonstrating to other actors how they can adopt new practices in a systemic process. Availability of knowledge facilitates the transition for interested parties to choose from new practices and hasten the double-loop learning in their sector.

Table 6-15 Different roles and strategies employed by sustainability-driven entrepreneurs

Process for creating a niche	Roles and strategies of sustainability-driven entrepreneurs	Consequences
Learning	• Learning through experience • Finding better awareness • Passing knowledge to new organizations	• Creating a schemata and form for their new practices • Improvising new solutions and creating new pathways • Translating tacit knowledge to implicit documented knowledge by passing it to new organizations
Networking	• Informal information sharing • Acting as practical example and initiating scepticism about dominant approaches • Demanding institutional support • Targeting market and promoting the philosophies • Forming new institutions	• Sharing knowledge and convincing other actors • Enhancing double-loop learning among the actors by sending positive feedbacks • Enhancing institutional embeddedness and creating a more supportive environment • Creating cognitive legitimacy among consumers • Creating an identity at industry level and finding socio-political legitimacy
Articulation	• Converging to a dominant design among entrepreneurs who are considered pioneers • Creating Vision and Support for Collective Effort • Setting Standards Population	• Facilitating the imitation process by creating a clear definition of their new practices • Enhancing the cognitive and socio-political legitimacy of their practices • Creating a common ground and clear boundaries for their new identity among other practices in their industry

The sustainability-driven entrepreneurs, through their cooperative approach to solving problems, create a dominant design for their new practices. Having a robust dominant design facilitates the imitation process for other actors. Moreover, they create visions and give support to the new organization, leading the collective action to boost their identity among other organizations in their industry and enhance their cognitive and sociopolitical

legitimacy. They can lobby and gain more resources. The sustainability-driven entrepreneurs might get involved in setting standards and procedures for their industry, as they wish to maintain the originality of the philosophies behind new practices. Creating standards for their new practices clarifies the boundary between their actions and formalize their practices in their sector. These entrepreneurial strategies are summarized in Table 6-15.

While creation of alternative organizational forms and sharing them with other actors is important, it does not necessarily result in wider changes at the industry level. Different socio-economic criteria influence the double-loop learning processes and impact the wider effect of those practices. Criteria such as financial gain and initial capital outlay of new practices, degree of newness, relevance to the quality of the product, legitimacy and transparency of third-party authorities, and policies in support of current trends, influence the decision of other organizations to choose from these new practices. They influence the double-loop learning by sending positive or negative feedback, stemming from contextual characteristics of situations and the nature of entrepreneurial actions, about the consequences of adopting new approaches. These criteria are summarized in Table 6-16 with their influences on the double-loop learning.

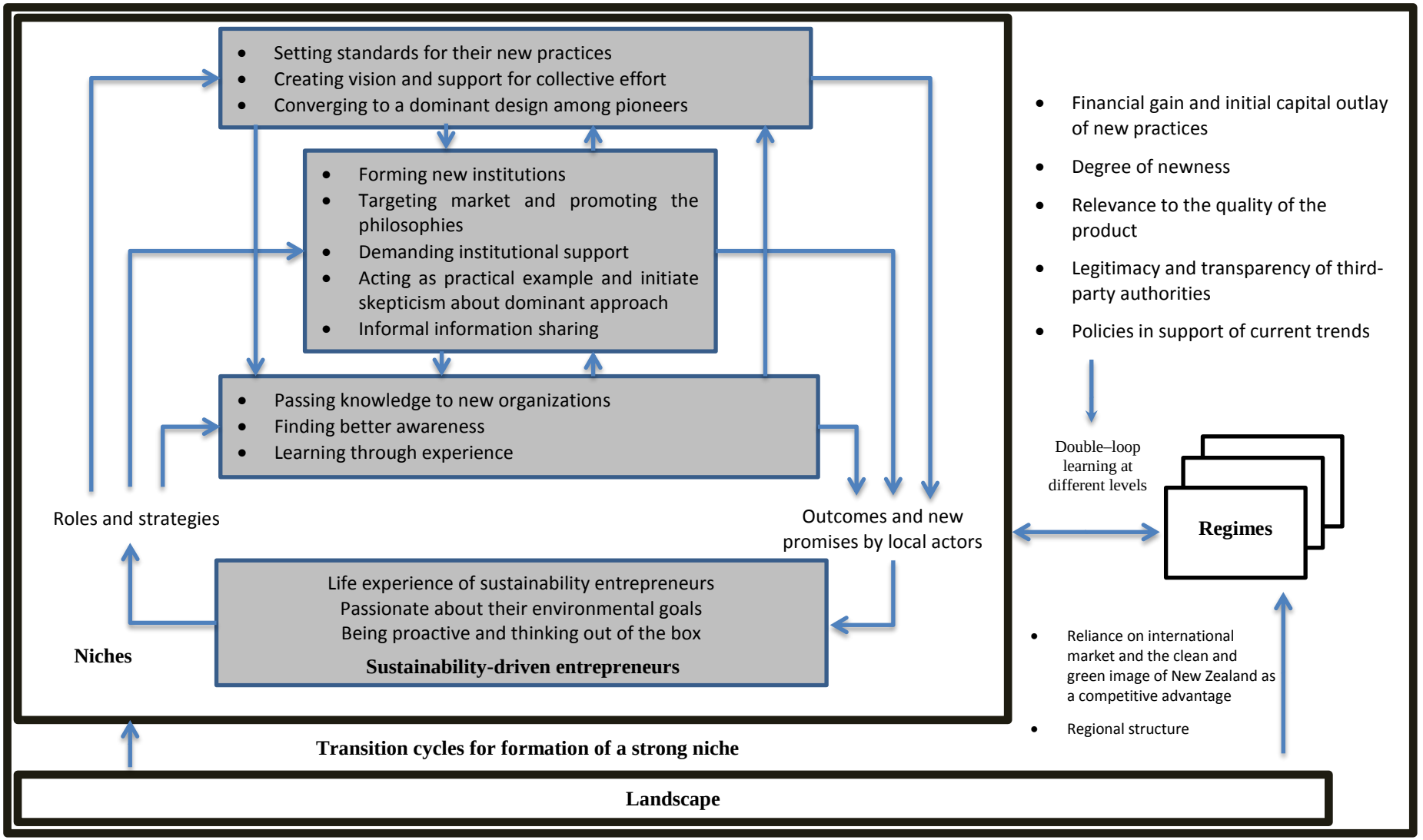
Table 6-16 Key socio-economic criteria influencing the double-loop learning process

Socio-economic criteria	Influences
Financial gain and initial capital outlay of new practices	Positive or negative impact about the financial performance of new practices
Degree of newness	More learning and positive feedback is required for activities departing far from current trends, which may hamper the double-loop learning
Relevance to the quality of the product	Good quality of products, produced by new practices, send a positive feedback for consumers and actors in the wine industry to adopt new practices
Legitimacy and transparency of third-party authorities	Leverage the level of trust between different markets, producers, and consumers that eventually create a more effective tie between these entities
Policies in support of current trends or new practices	Stabilizing the current trends make it difficult for new niches to break through the regimes Create windows of opportunities for new practice to break through dominant regimes

Considering the above-mentioned discussion and the model developed in Chapter Three, these categories can be integrated into one coherent model as presented in Figure 6-3. It shows how the sustainability-driven entrepreneurs initiate their practices by their intentions and initial knowledge formed in their life experience. They employ different strategies for learning, networking, and articulation to develop their own niches. Entrepreneurial strategies start at the individual and organizational level and move towards more collective actions when they find more acceptance among actors in their sector. The result of their actions may translate to dominant regimes by double-loop learning, which is influenced by different socio-economic factors.

The next chapter will use the findings from the two case studies, presented in this chapter and Chapter Five, and discuss them through the theoretical lens adopted in this research. It shows how these findings contribute to the extant literature on sustainability-driven entrepreneurs and clarifies their roles and strategies in sustainability transitions.

Figure 6-3 Dynamic complexities of sustainability-driven entrepreneurship in the wine industry of New Zealand



Chapter 7 *DISCUSSION*

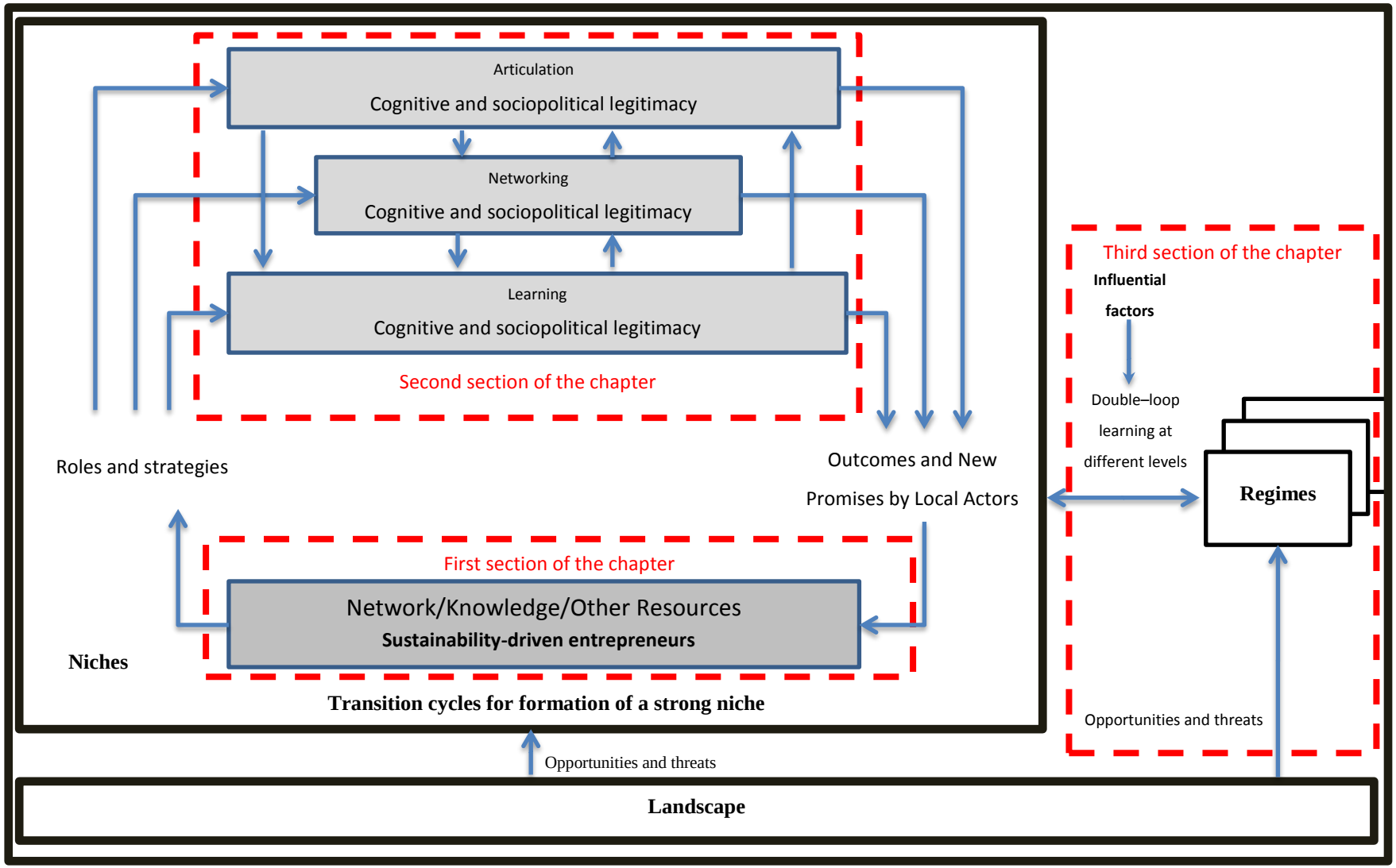
You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete. (Buckminster Fuller)

This chapter uses the findings from the two case studies, presented in Chapters Five and Six, and discusses them through the theoretical framework to address the research questions to engender a better understanding of entrepreneurial roles in sustainability transitions. This chapter highlights how the findings in this thesis inform the extant literature in sustainability-driven entrepreneurship and Sustainability Transition. Moreover, the chapter presents a cross-case comparison, which sheds light on similarities and differences between entrepreneurial actions with different priorities for social and environmental objectives. The presentation of the findings follows the structure shown in Figure 7-1.

Figure 7-1 The outline of the discussion chapter in this thesis

The outline is led by the model extracted from the theoretical lens in this research, presented in Chapter Three and represented here in Figure 7-2. The model demonstrates a cyclic process that starts with sustainability-driven entrepreneurs' intentions and backgrounds, and continues with entrepreneurial roles influential in niche development. The first section shows how entrepreneurs use their available resources to depart from current norms, employing competence-destroying strategies. The next section demonstrates how these entrepreneurs learn, network, and articulate their new practices to gain cognitive and sociopolitical legitimacy among other actors in their business environment to form a robust niche. These two sections are followed by a discussion on environmental factors that influence the wider acceptance of new practices by affecting the double-loop learning process and niche-regime translation. In the fourth section, the chapter describes the entrepreneurs' networks and explains how the densities of strategies are different for the two case studies with different priorities for social and environmental goals. Finally, the chapter concludes the findings, presents them in an integrated way, and highlights the contributions of this research.

Figure 7-2 Transition cycles for the formation of a robust niche with Evolutionary Theory focusing on entrepreneurial roles



7.1 Backgrounds and Intentions of Entrepreneurs

This section discusses the sustainability-driven entrepreneurs' backgrounds and explains how their life experiences form their intentions as entrepreneurs to initiate their new practices and depart from dominant norms and assumptions in their business environment (Aldrich & Ruef, 2006; Yitshaki & Kropp, 2015). The section contextualizes the findings in the following discussions and guides the reader to find a more comprehensive picture about the subject of the thesis; i.e. sustainability-driven entrepreneurs. Hence, these findings are presented as the introductory to the rest of the chapter to develop a deeper understanding about these individuals' intentions and their roles in transitions of socio-technical systems.

As discussed in Chapter Three, a high percentage of entrepreneurs are imitators and intend to reproduce the characteristics of successful organizations (Aldrich & Kenworthy, 1999; Aldrich & Ruef, 2006), or, at best, they may generate small variations from current organizational forms through incremental improvements (Aldrich & Ruef, 2006). As actors with bounded rationality, they are constrained by different factors such as habits, norms, and assumptions in their social settings (Bergek et al., 2008; Breslin, 2008; Foster & Potts, 2006; Fuenfschilling & Truffer, 2014), which shape their entrepreneurial behavior and lead them to follow dominant trends and institutions (Aldrich & Martinez, 2015; Katz & Gartner, 1988). However, variations still occur where a range of reasons tips the direction towards innovative trends, encouraging entrepreneurs to depart from current institutions and frameworks (Aldrich & Ruef, 2006; Kirkwood & Walton, 2010; Yitshaki & Kropp, 2015). For the sustainability-driven entrepreneurs in this thesis these reasons are summarized in Table 7-1 and further discussed in this section to highlight the contributions of this research.

Table 7-1 Entrepreneurial background and intentions in the two case studies and their theoretical implications

	Findings	Implications
Retail	• Previous life experience in social and environmental movements or at producers' level for organic shops	• Finding gaps in market and forming their worldviews towards green and ethical retailing • Forming their intention to start their new practices
	• Driven by values formed through their engagements in social and environmental movements or working at producers' groups	• Businesses as a means to address their social and environmental concerns • Finding satisfaction by achieving their social and environmental goals and defining different criteria to evaluate their businesses, compared to conventional models
	• Strong passion about their non-financial objectives	• Persistent in pursuing their social and environmental goals • Attached to their goals and make decisions based on emotions and biases • Nature of integration among social, environmental, and financial objectives defines the flexibility of organizational forms • Strong organizational culture about their new practices
	• Lack of business experience	• Detachment from dominant trends in their socio-technical regimes and ignoring legitimacy signals received in response to their actions • Liability of newness in management activities (Stinchcombe, 1965) that imposes a higher risk in the processes of learning, since sustainability-driven entrepreneurs have to develop these heuristics in the process of trial and error and through their experiences in real context (Aldrich & Ruef, 2006) • Lack of experience and distance from main stream actions help them to be open to innovative ideas (Aldrich & Ruef, 2006; Kuckertz & Wagner, 2010)

	Findings	Implications
Wine	• Previous work and life experience or educational background in a similar field	• Awareness about environmental problems and finding gaps and personal intentions to start their new practices • Established connections with dominant actors and basic knowledge about their industry and business in general • A better understanding about dominant institutional logics and productive hybrid connections with these institutions • Alert to legitimacy signals in their socio-technical systems, which help them to gain resources while at the same time make strategic decisions to pursue their social and environmental goals departing from current trends
	• Strong passion about their non-financial objectives	• Persistent in pursuing their social and environmental goals • Create strong organizational culture about their new practices and drive other people in their network to create new forms and identities in their business environment when there is no examples around them and institutional logics are not supporting of their acts (Aldrich & Kenworthy, 1999; Drori & Honig, 2013) • Finding self-satisfaction by achieving their social and environmental objectives and outlining different criteria for evaluation of their organizations
	• Moving between being proactive actors to self-centered people based on their available resources and financial stability	• Higher level of flexibility among sustainability-driven entrepreneurs in the wine industry compared to the ones in the retail sector that were willing to sacrifice their organizations for their wider social and environmental aims

The above-mentioned findings are discussed in light of the theoretical lens along with a cross-case comparison that highlights the contributions to the sustainability-driven entrepreneurship literature. These contributions can be categorized into four main arguments as shown in Table 7-2 and further discussed afterwards.

Table 7-2 Backgrounds and intentions of entrepreneurs and a cross-case comparison

	Contribution and Comparison
1	• Life experiences are important for sustainability-driven entrepreneurs to identify gaps, transform it to entrepreneurial opportunities, and find motivation to exploit them.
2	• Sustainability-driven entrepreneurs are passionate about their social and environmental objectives that help them to persist in their actions, motivate other people, and develop their new organizational forms.
3	• Lack of business experience creates a higher chance of departures among entrepreneurs; however, it may also disconnect entrepreneurs from dominant trends and impose a higher risk of failure on entrepreneurial action. Sustainability-driven entrepreneurs with better heuristic abilities and related background are more successful in the learning process and have more effective responses to legitimacy signals.
4	• Level of integration between social and environmental dimensions of new organizational forms with financial aspects varies based on the nature of the innovative approach. For new organizational forms in which the whole identity of the organization is dependent on social and environmental dimensions, the level of integration is higher and leaves entrepreneurs with lower level of maneuverability.

Sustainability-driven entrepreneurs are positioned between value-driven individuals who start their businesses motivated by non-financial objectives (Gibbs, 2006; Kirkwood & Walton, 2010; Parrish, 2008; Poldner et al., 2015; Tilley & Young, 2009) and profit-seeking people who gain competitive advantage by their social and environmental goals (Cohen & Winn, 2007; Dean & McMullen, 2007). The findings in this study are aligned with the former group of entrepreneurs. The sustainability-driven entrepreneurs, both in the wine industry and the retail sector, were motivated by their non-financial goals and started their businesses with environmentally- and socially-friendly practices driven by those motivations rather than determined by financial gain. Their motivations initiated from their consideration of their approach as the best way to address their social and environmental concerns. The interviewed sustainability-driven entrepreneurs are not pushed by outside regulations or constraining factors (Kirkwood & Walton, 2010; Yitshaki & Kropp, 2015); rather, they were pulled into their entrepreneurial activities by having personal intentions that formed through their life experiences.

The findings in this thesis suggest that previous experiences of the sustainability-driven entrepreneurs in related fields form their intentions, establish their initial networks, create conduits of information, and increase their awareness about social or environmental issues that eventually result in opportunity recognition and exploitation. These findings are aligned with previous literature (Belz & Binder, 2017; Choi & Gray, 2008b; Kuckertz & Wagner, 2010; Patzelt & Shepherd, 2011; Yitshaki & Kropp, 2015) where, for example, Belz and Binder (2017) show that sustainability-driven entrepreneurs identify social and environmental entrepreneurial opportunities in their private or professional life, and Patzelt and Shepherd (2011) explain that awareness about social and environmental degradation among entrepreneurs boosts the possibilities to identify and exploit 'sustainable opportunities'.

Previous literature suggests that entrepreneurial intention is one of the fundamental assets necessary for new organizations to come into existence (Aldrich & Kenworthy, 1999; Davidsson, 2006; Katz & Gartner, 1988). It drives entrepreneurs and encourages them to search and recognize entrepreneurial opportunities (Anderson, 1998) and motivates them to use their social skills to create new combinations and improvise innovative solutions (Aldrich & Martinez, 2015). These procedures are highly intertwined with emotions and habits (Aldrich & Yang, 2014); entrepreneurs with stronger emotional attachments to their objectives may show higher levels of perseverance in their business development activities (Aldrich & Yang, 2014). Previous research demonstrates a close relationship between 'values' and 'causes' or 'motivations' and 'identities' of individual entrepreneurs in their organizations (Anderson, 1998; Choi & Gray, 2008b; Jolink & Niesten, 2015; Levinsohn, 2013; Schaltegger, 2002; Schaper, 2010; Walton & Kirkwood, 2013) and identifies passion as one of the main characteristics of almost all entrepreneurs (Cardon, Wincent, Singh, & Drnovsek, 2009).

The findings in this research, aligned with the above-mentioned literature, demonstrate that for sustainability-driven entrepreneurs, this passion and emotional attachments expands to social and environmental dimensions of their businesses. Previous research confirms this argument, where for example, literature of sustainability-driven entrepreneurship highlights the influence of worldviews and philosophies among sustainability-driven entrepreneurs (Jolink & Niesten, 2015; O'Neill et al., 2006; Schlange, 2006b; Silajdžić et al., 2015). It seems that the sustainability-driven entrepreneurs are

driven by more inclusive objectives that initiates from their intentions to address social and environmental problems. This may highlight the possibility of broadening the definitions of opportunity recognition and exploitation in conventional entrepreneurship from merely an economic term to a more inclusive one that consider other aspects of sustainable opportunities (Cohen et al., 2008; Parrish, 2010; Thompson et al., 2011). With this inclusive view, entrepreneurship can be a driver for development and evolution in various dimensions of human life, including economic systems.

The findings in this thesis show that these strong motivations may lead sustainability-driven entrepreneurs to make decisions based on their assumptions, disregarding the dominant norms in their socio-technical systems, resulting in unproductive connections with external institutional contexts. Consequently, their biases may lead them to ignore feedback (received in response to their actions) that may hamper the learning process and create a higher risk of mortality for their organizations. This ignorance may disconnect new organizational forms from salient stakeholders and hinder resource mobilization. It seems that the sustainability-driven entrepreneurs who effectively balance their motivations and institutional constraints, as examples were presented in Sections 6.3.2.2.2 and 5.3.2.1.2, are more successful in creating hybrid business models. These hybrid models enable entrepreneurs to pursue their sustainability logic, while addressing the institutional constraints imposed by dominant economic norms in their socio-technical systems, maintaining their viability in different stages of their development.

Moreover, previous literature suggests that the organizing principles for sustainability-driven entrepreneurs are different from conventional forms, where social and environmental objectives are goals in their own right that may become an integrated part of the business (Parrish, 2010). The integration between social and environmental dimensions and financial aspects leads to different evaluation principles for the new organizational forms. Likewise, the findings in this thesis indicate that the sustainability-driven entrepreneurs in both case studies outlined different criteria for evaluation of their businesses and discussed finding a sense of success by achieving their social and environmental goals. This notion confirms the findings from previous literature that defines broader variables than merely economic ones for evaluation of a sustainable business (Cohen et al., 2008) and argues that sustainable entrepreneurs can become

motivated by contributing to their regional development (Choi & Gray, 2008a; Schlange, 2006b). Finding self-satisfaction by achieving their non-financial objectives helps these entrepreneurs accept lower financial performance and preserve their alternative institutional logic, creating value in social and environmental dimensions. This notion eventually helps them overcome difficulties and form their new identities as valid substitutes to current trends that may lead to broader systemic changes in their socio-technical systems and sustainability transitions.

Yet, comparison of the findings from the two case studies highlights that the degree of integration may vary based on the nature of the new practices. For sustainability-driven entrepreneurs in the retail sector, the whole identity and reputation of their businesses is associated with their social and environmental goals, while for sustainability-driven entrepreneurs in the wine industry, having environmental objectives is attached to other bottom lines and their identity as wine producers. This notion results in a higher degree of integration for sustainability-driven entrepreneurs in the retail sector between social and environmental dimensions and financial bottom lines, leaving these people with lower possibilities of maneuvering. Sustainability-driven entrepreneurs with higher levels of integration have lower potential for flexibility in their organizational forms as they have to abide by expectations and maintain their reputation by sticking to their principles. This lower level of flexibility increases the risk of failure among the former group, since having fewer strategic choices complicates resource mobilization and hinders the legitimization process.

Furthermore, a comparison between the findings in this research, related to the discussion in Sections 5.3.1.3 and 6.3.1.1, suggests that sustainability-driven entrepreneurs in the wine industry had more business experience compared to their counterparts in the retail sector, as most of them were involved in businesses activities before initiating their new practices. The sustainability-driven entrepreneurs in the retail sector were mostly involved in other activities and found their intentions through their engagements with broader social and environmental movements. While business experience may encourage entrepreneurs to practice within current norms and institutions, and simultaneously lowers the chance for innovation (Aldrich & Ruef, 2006; Kuckertz & Wagner, 2010), this research found that lack of knowledge and business experience may hinder the learning process during the gestation process and leave new

organizational forms out of the selection criteria (see Section 5.3.1.3). Previous experience of entrepreneurs and familiarity with associated institutional fields create a balance between new practices and conventional trends, which enables entrepreneurs to interpret dominant narratives, understand feedback, and decide how they can adopt and combine these logics (De Clercq & Voronov, 2011; Djupdal & Westhead, 2015).

The findings suggest that sustainability-driven entrepreneurs with better management knowledge and higher awareness of dominant trends and practices are more effective in using strategies such as visuals, certifications, and symbols to legitimize their new practices and create robust organizational forms. This notion generates a higher chance of success among sustainability-driven entrepreneurs to create their new identities and gain cognitive and sociopolitical legitimacy to form a robust niche, which eventually may result in wider systemic changes in their socio-technical systems. In this regard, the sustainability-driven entrepreneurs also explained that existing educational resources are not aligned with their needs and discussed a gap between their entrepreneurial objectives and educational or consulting materials. It seems that the availability of more progressive educational and consulting material outside of current norms, and aligned with new philosophies, would facilitate learning (and subsequently action) for sustainability-driven entrepreneurs and help them to adopt a proactive approach towards their new practices.

As shown in Table 7-2, the discussion of the findings in this section highlights the role of sustainability-driven entrepreneurs in creation of new organizational forms. It shows that sustainability-driven entrepreneurs may have broader definitions for entrepreneurial opportunities than merely economic terms that are driven by their personal intentions. It argues that, like conventional entrepreneurs, the emotional attachment and passion of sustainability-driven entrepreneurs to their new socially and environmentally practices, helps them to persist and overcome problems to create their new organizations with institutional logics differ from dominant norms and trends. Yet, the research shows that this emotional attachment may impose a higher risk on entrepreneurial actions as they may ignore feedback from their surrounding environment and make biased decisions. Moreover, the research shows that while business experience may lower the chance for innovative activities among sustainability-driven entrepreneurs, it may also decrease the risk of failure among them. The sustainability-driven entrepreneurs with better heuristic and managerial experience can build more constructive relationships with salient actors

and have more effective responses to legitimacy signals from their business environment. Although, the flexibility of their responses is restricted by the degree of integration between their social and environmental value and financial objectives. Eventually, the legitimate organizational forms, created by the sustainability-driven entrepreneurs, can initiate wider changes in their socio-technical systems if they find external legitimacy and diffuse among other actors in their business environment. Sustainability entrepreneurs may play a variety of roles and employ different strategies to find cognitive and sociopolitical legitimacy among such actors to validate their actions. This notion is discussed in the following section.

7.2 Emergence of New Niches: Sustainability-driven Entrepreneurs' Roles and Strategies

As discussed in Chapter Two and Four, this research examines sustainability-driven entrepreneurs who are considered pioneers in their sectors or industries. Pioneers are defined as firms new to an industry that employ competence destroying strategies (defined in Section 3.2.2) (Aldrich & Ruef, 2006). Extant literature suggests that pioneers, if successful, have higher return rates through longer periods of time, but they also are exposed to a higher risk of failure. They have to learn and create new routines with fewer, if any, models around them and have to establish connections with key actors and stakeholders in their business environment to legitimize their existence and gain access to resources (Aldrich & Fiol, 1994; Stinchcombe, 1965). This section discusses how the sustainability-driven entrepreneurs learn and create new forms of organizations (Belz & Binder, 2017; Schaltegger et al., 2015; Schick et al., 2002). Moreover, it explains how they interact with stakeholders to introduce their new ideas, convince other actors, and find cognitive and sociopolitical legitimacy (Aldrich & Ruef, 2006; Johnson et al., 2006) and if necessary, change the norms and the institution in their favor (Aldrich & Fiol, 1994; Aldrich & Martinez, 2010).

The section explains how sustainability-driven entrepreneurs use strategies to establish new niches that may eventually become robust and translate to dominant regimes in their socio-technical systems (Brown & Vergragt, 2008; Smith, 2007; Turnheim & Geels, 2013). The process of niche development takes place through transition cycles, as explained in

Chapter Three (Schot & Geels, 2007; Smith, 2007), where activities can be categorized into three groups of (1) learning, (2) networking, and (3) articulation. Abstracted from this literature (Smith, 2007) and similar to the results chapters (Chapters Five and Six), the discussion in this section is presented in the same order. It starts with entrepreneurial roles for learning and development of knowledge within their business and across their niche networks. It continues by networking strategies used by sustainability-driven entrepreneurs to establish new connections, exchange resources, and gain cognitive and sociopolitical legitimacy. These sections are continued by entrepreneurial actions that may result in shared visions and create consensus among diverse actors in their forming niche. Each section starts with the individual and business level strategies and move towards collective actions.

7.2.1 Roles and Strategies for Learning

This section shows how sustainability-driven entrepreneurs learn to create legitimate organizational forms for their new practices and share their experiences with other actors that may create the initial knowledge for their emerging networks at the niche level (Aldrich & Ruef, 2006; Schot & Geels, 2008). The sustainability-driven entrepreneurs have to learn and give schemata to haphazard information around their actions (Aldrich & Ruef, 2006). This learning takes place in different dimensions such as technology, market, and cultural meanings; which can be categorized into technology and social contexts. In the latter, meanings are subjective and perceptions vary based on worldviews and philosophies of actors involved in those situations (Smith, 2007). This process eventually creates the foundational knowledge for their new practices in their niche networks (Schot & Geels, 2008) that may translate to the dominant regime and result in wider systemic changes in their socio-technical system. The findings in this research, as presented in Table 7-3, demonstrate that the sustainability-driven entrepreneurs have different roles in this regard, which is further discussed in this section.

Table 7-3 Strategies for learning in the two case studies and their theoretical implications

	Findings	Implications
Retail	• Continuous learning through experience and negotiations with diverse actors in their business environment	• Creating schemata, giving forms, and developing procedures for their new practices • Justifying their actions and gaining internal and external legitimacy (Agarwal & Shah, 2014; Aldrich & Ruef, 2006)
	• Unclear definition of ethical or green retailing both among researchers and practitioners	• Sustainability-driven entrepreneurs in the retail sector perceive this concept in very different ways • The meaning and definitions are built in negotiations with other stakeholders and leave a lower degree of control and flexibility for sustainability-driven entrepreneurs • Higher risks in learning processes as performance criteria and outcomes can be quite diverse based on perceived meanings of ethical consumerism
	• Moving between different practices by compromising and prioritizing different objectives	• A hybrid business model that moves along different dimensions of a sustainable business

	Findings	Implications
Wine	• Learning through practice and experience (trial and error)	• Creating schemata and procedures for new organizational forms in their local settings and developing clear performance criteria for their practices • Transforming the abstract theoretical knowledge to practical procedures
	• Continuous learning and integrating more ambitious sustainability goals to their organizations • Re-evaluating their organizational forms and revising their social and environmental objectives in their businesses	• A hybrid model of a sustainable business where sustainability-driven entrepreneurs improvise new solutions for their businesses considering their available resources and institutional constraints (bricolage)
	• Becoming a nucleus of knowledge for their forming niche	• Creating local knowledge and local experiment models • Collective entities at population level capture the tacit knowledge among the sustainability-driven entrepreneurs as a valid local experience and translate it to explicit knowledge • Institutionalizing the knowledge at the population level by documentation, research, and standardization

Discussing the findings through the theoretical lens in this research and comparison between the two case studies offer new insight about entrepreneurial actions in the process of niche development and clarify similarities and differences between the entrepreneurial roles, in wider systemic changes in their socio-technical system, with different priorities towards social and environmental dimensions. The arguments in this section are summarized in Table 7-4 and further explained afterwards.

Table 7-4 Strategies for learning and a cross-case comparison

	Contribution and Comparison
1	• Learning along technical aspects are easier compared to social dimensions where meanings emerge because of negotiation among stakeholders.
2	• Influenced by different interpretations; sustainability-driven entrepreneurs with priorities for socially driven innovation have less control over learning processes compared to technical learning where more objective performance outcomes justify actions and offer directions for further improvements.
3	• During transition cycles and through experience, sustainability-driven entrepreneurs re-evaluate their values and organizational forms. Considering the feedback from their environment, available resources, and institutional constraints, they continuously move across different institutional logics to maintain their viability while pursuing their sustainability goals.

The findings in the previous section and literature of sustainability-driven entrepreneurship has highlighted the role that the sustainability-driven entrepreneurs have in creation of new identities and organizational forms (Belz & Binder, 2017; Schaltegger et al., 2015; Schick et al., 2002; Walton & Kirkwood, 2013). However, except for a handful of literature in this area (Choi & Gray, 2008b; Keskin et al., 2013; Parrish, 2010), research has overlooked how learning takes place in processes of organizational development and niche formation in sustainability-driven entrepreneurship and sustainability transition. Extant literature does not show a comprehensive picture of learning processes and does not explain how the roles of sustainability-driven entrepreneurs might be different from conventional models. The findings in this research offer new insight on some aspects of entrepreneurial learning.

The findings in this research, aligned with extant literature of conventional entrepreneurship (Aldrich & Ruef, 2006; Aldrich & Yang, 2014; Cope & Watts, 2000), show that sustainability–driven entrepreneurs learn and develop schemata around their new practices through processes of trial and error and experience in real time actions.

However, new insight from this research suggest that the learning process and entrepreneurial roles may vary based on the nature of the innovative approach and the dimensions of departure from dominant norms and institutional logics in socio-technical systems. It seems that learning for social dimensions takes place through negotiations that happens among various actors (see Sections 5.3.2.2.4 and 5.3.2.2.5), where subjective meanings of social dimensions may be perceived differently by a diverse range of philosophies. As it was shown in Section 5.3.2.1.2, this notion imposes a higher risk on entrepreneurial actions, because sustainability-driven entrepreneurs should make decision based on their personal interpretations. Yet, more objective outcomes from technological innovation, where examples are presented in Sections 6.3.3.3 and 6.3.3.1, facilitate the processes of learning. Decision-making is easier for technological innovation as it is based on tangible evidence and more accountable performance criteria, such as decrease in carbon foot print and usage of chemical in viticulture. The findings in this research, addressing the main research question in this thesis, suggest that sustainability-driven entrepreneurs with innovative approaches inclined towards social dimensions have a lower level of control over the learning procedures and consequently lower influence in wider systemic changes in socio-technical systems.

Furthermore, the findings in this research show that through processes of learning by doing and experiencing feedback from the business environment, sustainability-driven entrepreneurs gain a better understanding about their available resources and institutional constraints. This has also been discussed in conventional entrepreneurship research (Aldrich & Yang, 2014; Cope & Watts, 2000). Yet, for sustainability-driven entrepreneurs this realization expands to their social and environmental objectives and may result in alteration of these goals in different stages of development. Sustainability-driven entrepreneurs consciously make strategic decisions to balance their social and environmental values with institutional constraints imposed by dominant institutional fields in their socio-technical systems (see Sections 5.3.2.1.2, 6.3.2.1.2, and 6.3.2.2.2). This argument extends the findings from Belz and Binder (2017) and Keskin et al. (2013) in their sequential model for sustainable business development and demonstrates that sustainability-driven entrepreneurship is a continuous process of learning and legitimizing that takes place through transition rounds and bricolage (Chiles et al., 2007). This finding is closer to the discoveries by Poldner et al. (2015) and Gibbs and O'Neill (2014) where they suggest that duality (having social and ecological goals vs. economic objectives) of

logics in sustainability-driven entrepreneurship may become multi-dimensional and results in hybrid business models that move across different dimensions of sustainability during development (Gibbs & O'Neill, 2014; Poldner et al., 2015). Hence, addressing the main research question in this thesis, it seems that sustainability-driven entrepreneurs play a role in wider systemic changes in their socio-technical systems by creating hybrid business models, considering multidimensionality of sustainability. This research confirms the indication by Poldner et al. (2015) that a better understanding is required to explain how entrepreneurs move across institutional logics and how they integrate them in a new organizational form.

Despite a small amount of research on roles and strategies that sustainability-driven entrepreneurs have in development of knowledge within their new organizational forms, so far, research on sustainability-driven entrepreneurship has not paid enough attention to entrepreneurial roles in the creation and institutionalization of knowledge at their niche and among their new networks at the population level (Smith, 2007). Nevertheless, the entrepreneurial role, in this regard, has been emphasized by general theories in entrepreneurship literature (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006). Aligned with the latter, the findings in this research show that while sustainability-driven entrepreneurs create practical models of their new practices with measurable performance criteria, their successful business model could be a small-scale experimental model for other actors and facilitate wider systemic changes in their socio-technical systems. This rational may address the research question in this thesis clarifying how successful business models of sustainability-driven entrepreneurs provide the initial knowledge for new networks of actors at the niche level.

Most of the entrepreneurial knowledge is kept in the entrepreneurs' memory and organizational procedures (Aldrich & Ruef, 2006). The findings from this research suggest that if new practices find acceptance and become legitimate among wider actors, sustainability-driven entrepreneurs become an important source for the initial knowledge of their forming niche; which is consistent with the previous findings in conventional entrepreneurship research (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006). The findings demonstrate that formation of trade associations and collective actions facilitate the sharing process. These new entities transform the tacit knowledge among entrepreneurs to explicit documented knowledge, available for wider interested parties through

documentation and field days observations (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006).

In summary, the findings, similar to previous literature in conventional and sustainability-driven entrepreneurship, highlight the entrepreneurial role in learning processes. They demonstrate that sustainability-driven entrepreneurs learn and develop robust procedures and schemata for their new organizational forms through trial and error and real time practices. Yet, the findings offer new insight about differences between social and technological learning and entrepreneurial roles in knowledge development at the niche level. One the one hand, the findings show that learning for social dimensions takes place through negotiations among a diverse range of actors, who have different interpretations from entrepreneurial actions, leaving lower levels of control for sustainability-driven entrepreneurs over learning procedures. On the other hand, the findings clarify that more objective outcomes and tangible performance criteria for technological dimensions facilitate the process of learning for entrepreneurs and other actors in their business environment. Hence, addressing the research questions in this thesis, it can be concluded that influence of sustainability-driven entrepreneurs in transitions of socio-technical systems decreases when subjectivity of their practices, which demand considerable amount of social learning, increases. Moreover, the discussions show that, like conventional entrepreneurs, sustainability-driven entrepreneurs constantly re-evaluate their objectives and procedures, considering their available resources and institutional feedback. However, due to complexities associated with the concept of sustainability, the findings extend the literature on this notion with insight that are unique to sustainability-driven entrepreneurship. The findings suggest that sustainability-driven entrepreneurs move across different institutional logics during various stages of development to obtain the resources necessary for their viability. This may require compromising of their social and environmental goals. It describes sustainability-driven entrepreneurship as a hybrid phenomenon having flexible objectives and changing procedures. Hence, the sustainability-driven entrepreneurs play a crucial role for creation of these hybrid business models and their survival. As discussed in the previous section, their success is conditioned on their learning abilities, emotional attachments, and level of integration between their social and environmental goals and their business identities. Finally, aligned with literature of conventional entrepreneurship, the findings show that valid organizational forms, created by sustainability-driven

entrepreneurs, would be a source of knowledge for their forming niche networks. This availability of knowledge facilitates the adoption process for late-movers and results in development of a robust niche that may translate to the dominant regime in their socio-technical system. Yet, different approach among sustainability-driven entrepreneurs for information sharing among their networks differentiate them from conventional entrepreneurs, which is further discussed in the following section.

7.2.2 Roles and Strategies for Networking

This section discusses how sustainability-driven entrepreneurs communicate with other actors in their socio-technical systems, develop new networks, share information, and exchange resources in order to gain cognitive and sociopolitical legitimacy (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006; Tracey et al., 2011; Zhang & White, 2016). These findings highlight the roles that sustainability-driven entrepreneurs play in wider systemic changes in their socio-technical systems. In the beginning, new organizational forms face the liability of newness (Stinchcombe, 1965), hence access to resources is challenging and the rate of failure is high (Suchman, 1995). Therefore, sustainability-driven entrepreneurs have to articulate the essence of the hybrid logic, underpinning the new organizational forms, by explaining and justifying its principal elements so that it can be easily understood by actors outside the organization (Markard et al., 2016; Tracey et al., 2011). Moreover, the wider influence of sustainability-driven entrepreneurs is dependent on the external recognition of their actions by salient actors (Aldrich & Ruef, 2006; Fiol & Romanelli, 2012). This external recognition increases with development of new networks and supporting institutions that create institutional embeddedness (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006; Schot & Geels, 2008; Smith, 2007). Similar to most of the social and technological changes, finding cognitive and sociopolitical legitimacy is heavily dependent on communication (Suchman, 1995); in this case between sustainability-driven entrepreneurs and their various audiences as summarized in Table 7-5.

Table 7-5 Strategies for networking in the two case studies and their theoretical implications

	Findings	Implications
Retail	• Connecting producers and consumers	• System-building activities by establishing new networks and enabling capabilities among actors involved • Creating institutional embeddedness that facilitates the adoption process for late-movers
	• Education as a marketing tools and using ritual and real experiences to convince consumers and change their mind-sets	• Meanings emerge through negotiation where participating parties can exchange opinions and build consensus around contested concepts such as ethical and green retailing • Finding cognitive legitimacy among their salient stakeholders by challenging their taken-for-granted assumptions and reaching common grounds
	• Emphasis trustworthiness of information	• Enhancing the level of trust and establishing more predictable ties
	• Sharing information with like-minded businesses and role-modeling for other actors	• Facilitating learning for like-minded people and changing cognitive assumptions among skeptical actors
	• Joining collective activities and contributing to communal goals of their niche networks	• Creating collective identity and mobilizing resources to pursue their goal at a collective level (Fiol & Romanelli, 2012) • Finding media support, that expands coverage and enhances the cognitive legitimacy of the new trends in a wider sense at the landscape level (Aldrich & Fiol, 1994; Aldrich & Ruef, 2006; Tracey et al., 2011)
	• Diversity of opinions and subjective meanings of ethical and green consumerism	• Initiate conflicts among actors involved in cooperative actions • Difficulties in consensus making and finding a common ground for new practices (Geels & Raven, 2006)

	Findings	Implications
Wine	• Information sharing with like-minded people and solving problems through collective learning	• Facilitating learning among like-minded people and saving resources • Creating cognitive legitimacy among the actors involved • Reaching to an agreement on their schemata and models and development of a dominant design for their new practices (Brown et al., 2004; Geels et al., 2008)
	• Role modeling for skeptical actors by showing successful examples of their new practices	• Questioning the taken-for-granted assumptions among actors in socio-technical systems • Symbolically showing to other stakeholders that their new forms of organization is successfully working within their local and institutional context (Aldrich & Ruef, 2006)
	• Interactions of sustainability-driven entrepreneurs with other agencies and institutions	• Sustainability-driven entrepreneurs as pioneers send legitimacy signals to other subsystems in their socio-technical systems to develop the necessary requirements and support their new organizational forms
	• Facilitating collective actions and creating new institutions	• Establishing a bridge between members' identification (developed by sustainability-driven entrepreneurs and early adopters) and collective identity (Fiol & Romanelli, 2012) • Gaining sociopolitical legitimacy that empowers new niches to aim for regulative and institutional change (Aldrich & Fiol, 1994; Bergek et al., 2008; Forbes & Kirsch, 2011) • Creating a more systemic way for sharing knowledge among wider audiences • Collective marketing to inform consumers that might eventually change the norms among consumers (Forbes & Kirsch, 2011)

Discussing the above-mentioned findings through the theoretical lens and comparison between the two case studies highlight some entrepreneurial roles that addresses the research question in this thesis. The arguments in this research are summarized in Table 7-6 and further explained in this section.

Table 7-6 Roles and strategies for networking and a cross-case comparison

	Contribution and Comparison
1	• Sustainability-driven entrepreneurs may use proactive strategies to gain cognitive and sociopolitical legitimacy and develop their niche network. These roles and strategies can be categorized to (1) system-building and institutional entrepreneurship, (2) knowledge-sharing and collective learning, and (3) role-modeling.
2	• Sustainability-driven entrepreneurs create institutional support through partnership with like-minded actors and creating demand for other organizations (push and pull).
3	• Sustainability-driven entrepreneurs are very willing to share information and exchange experiences with like-minded people, compared to traditional business models that use legal protections for their new practices.
4	• Failure of new organizational forms may induce uncertainties among other actors in socio-technical systems. Hence, as previously discussed, sustainability-driven entrepreneurs continuously reevaluate their values and organizational forms to maintain their viabilities by addressing institutional constraints, while simultaneously pursuing their social and environmental objectives.
5	• Sustainability-driven entrepreneurs use self-imposed regulations such as third-party certifications to enhance their identity, create standard procedures, and distinguish themselves from ones with fake claims.
6	• Sustainability-driven entrepreneurs use their social skills to promote collective action and create new institutions that eventually enhance sociopolitical legitimacy of their practices. This sociopolitical legitimacy empowers them to lobby with salient actors in their business environment, gain resources, and pass regulations in favor of their trends.
7	• Subjectivity of meanings for social innovation leaves the entrepreneurs with lower level of control over validation and external legitimacy-making.
8	• In situations where context does not provide sufficient level of trust, sustainability-driven entrepreneurs should employ strategies to establish trustworthy relationships.

The findings from the two case studies indicate that sustainability-driven entrepreneurs play a variety of roles and use different strategies to achieve external validity by enhancing their cognitive and sociopolitical legitimacy. These roles and strategies can be categorized into (1) system-building and institutional entrepreneurship; (2) knowledge-sharing and

collective learning; and (3) role-modeling. However, the nature and quality of these roles can be different for practices with subjective characters, and the more objective ones focused on technological aspects.

As shown earlier, the sustainability-driven entrepreneurs challenge the dominant institutional logic in their socio-technical systems by developing new organizational forms. Since they are considered pioneers in their socio-technical systems, supporting networks and institutions are not yet in place to address their needs (Aldrich & Ruef, 2006; Schot & Geels, 2008). Aligned with the findings from Janssen and Moors (2013), and Klein Woolthuis (2010), this research indicates that sustainability-driven entrepreneurs deliberately use strategies to develop new networks who are willing to work with their new norms and institutional logics. This is aligned with conventional entrepreneurship literature (Aldrich & Ruef, 2006; Davidsson, 2006) where findings indicate that almost all innovative entrepreneurs have to develop new networks to find access to scarce resources. The findings suggest that sustainability-driven entrepreneurs form partnerships with like-minded actors and help them across these networks to advance their capabilities. Moreover, the findings suggest that successful organizational forms, developed by sustainability-driven entrepreneurs, send legitimacy signals to other supporting organizations; such as third-party authorities, complementary technologies, and educational parties, to develop necessary procedures in their organizations to address the with their emerging niches. A growing population of new organizational forms and an increasing rate of exchange between them and other actor groups boost their legitimacy (Schoonhoven & Romanelli, 2001; Stinchcombe, 1965). This notion enables the supporting institutions to invest more in particular requirements of the new organizational forms and institutionalizes the associated procedures in their own organizations. Hence, addressing the research question in this thesis, the findings suggest that sustainability-driven entrepreneurs play a significant role in development of new networks through ‘push’ and ‘pull’ forces, which eventually may facilitate wider systemic changes in their socio-technical systems. They either deliberately establish new ties with actors that work, based on similar institutional logic, or create demand in other institutions to address needs associated with new organizational forms. Development of these networks create institutional embeddedness for their new practices and facilitate the adoption process for late movers, which consequently may translate their emerging niche to the dominant regime in their socio-technical systems.

One of the roles that seems to be employed in a unique way by sustainability-driven entrepreneurs is information sharing. The sustainability-driven entrepreneurs in both case studies were very willing to share information with like-minded actors and competitors. Theory suggests that learning from similar organizational forms shapes the foundational knowledge for creation of a niche and assures its growth (Aldrich & Baker, 2001; Aldrich & Martinez, 2010; Smith, 2007). Information sharing by sustainability-driven entrepreneurs makes this knowledge available for their emerging networks and establishes the foundational knowledge for their development (Smith, 2007). Although previous literature proposes that innovative activities in businesses can be legally protected with patents, copyrights, and trade secrets (Aldrich & Baker, 2001; Aldrich & Ruef, 2006), the findings in this thesis demonstrate that sustainability-driven entrepreneurs are very keen to share knowledge and encourage other people to employ the same practices in their businesses environment. As discussed in Sections 5.3.2.2.7 and 6.3.2.2.1, the quality of this information sharing is unique for sustainability-driven entrepreneurs, compared to conventional entrepreneurs who usually use information gaps in their favor for financial gain. The findings in this research propose that cooperation among sustainability-driven entrepreneurs in activities such as information sharing and collective learning may constitute a different motivation compared to conventional models of entrepreneurship that protect their knowledge through legal enforcement. It seems that personal motivation of sustainability-driven entrepreneurs for addressing social and environmental degradation encourages them to be more proactive in this regard.

Hence, one of the roles for sustainability-driven entrepreneurs that is differ from conventional entrepreneurs and facilitates wider systemic changes in socio-technical systems is their willingness for information sharing. The findings show that the level of information sharing varies among different practices. This seems to have originated from different reasons, such as population of organizations involved, level of development, and initial legitimacy of new organizational forms. While information sharing creates cognitive legitimacy among the stakeholders involved in these activities, a higher level of cognitive legitimacy attracts more attentions. This mutual relationship creates a positive loop between information sharing and cognitive legitimacy where enhancement in one triggers a positive effect in development of the other (Berkhout et al., 2004; Geels & Raven, 2006). Furthermore, as it will be discussed in Section 7.2.37.2.3, information sharing facilitates

collective learning and creates a social environment for consensus making that eventually results in a dominant design for new practices of entrepreneurs (Brown et al., 2004; Geels et al., 2008). In turn, attaining a dominant design enhances the cognitive legitimacy among actors involved and institutionalizes the new trends (Bergek et al., 2008; Lopolito et al., 2013). Institutionalization of these new trends fosters opportunities for further collaboration among participating parties.

Besides information sharing that is different from conventional models, the sustainability-driven entrepreneurs in both case studies highlighted role-modeling for other actors as one of their main aims, which is also emphasized by previous literature in sustainability-driven entrepreneurship (Choi & Gray, 2008b; Walton & Kirkwood, 2013). Strong commitment of sustainability-driven entrepreneurs to their social and environmental objectives, along with their legitimate organizational forms, challenges the dominant institutional logic in their socio-technical system. Successful outcomes of their new practices question the norms among skeptical actors and encourage them to reevaluate their taken-for-granted assumptions (Argyris, 1976). Creating a positive perspective for other actors has such an importance influence that some of the sustainability-driven entrepreneurs expressed their concerns that their failure may induce uncertainty about their new practices (see Sections 5.3.2.2.6 and 6.3.2.2.2). Hence, as discussed in previous sections, sustainability-driven entrepreneurs constantly reevaluate their values and strategies to address institutional constraints and maintain their viability, avoiding failures and maintaining their validity as role models. This notion has been discussed in previous literature of institutional entrepreneurship where, for example, Tracey et al. (2011) argues that failure of entrepreneurial actions of role models may lower the credibility of their organizational forms as legitimate alternatives for current institutional logics.

Sustainability-driven entrepreneurs not only rely on tangible feedback and rational aspects of their organizational forms to create knowledge and convince other likeminded actors to initiate similar practices, but also use rituals and storytelling to legitimize cultural and social aspects of their actions among consumers. This strategy has also been used by conventional entrepreneurs for legitimacy making (Aldrich & Baker, 2001; Garud, Schildt, & Lant, 2014; Suddaby & Greenwood, 2005). This type of strategy is particularly important when the area of concern is subject to interpretation and objective evaluation criteria are rare, which makes it more relevant to sustainability-driven entrepreneurs with priorities

for social objectives as discussed in Section 5.3.2.2.4. Storytelling and rituals enable sustainability-driven entrepreneurs to transfer their message in social interactions avoiding scientific reasoning (Suddaby & Greenwood, 2005). These stories create a social environment for negotiation. Participants would discuss issues, create meaning, and share interpretations to find common grounds. If the participants in these social interactions reach a shared story and interpret the situation in a consistent way, they can internalize the values underlying those stories and form a common identity (Fiol & Romanelli, 2012). However, previous research indicates that deviations of entrepreneurs from these internalized values may become a source of disappointment and imposes a risk of a loss of legitimacy (Garud et al., 2014).

Furthermore, theory suggests that trust plays a crucial role in the success of entrepreneurs (Aldrich & Baker, 2001; Aldrich & Ruef, 2006). When there is insufficient knowledge available about new practices trust plays a substitute role, which is dependent on network ties (Aldrich & Baker, 2001). While regional structure in the wine industry and its sharing culture offer a fruitful context with this regard, sustainability-driven entrepreneurs in the retail sector discussed reliability and integrity of information to build more predictable ties in their interactions. It seems that the level of trust among the actors highly influences the diffusion of information and influences the effectiveness of entrepreneurial strategies. Sustainability-driven entrepreneurs may need to act and build upon the status of trust in their socio-technical systems, if it does not provide a secure context for information sharing. Tools, such as credibility from green awards and competitions, as discussed in Chapter Six, may be adopted by entrepreneurs to leverage their claim. Aligned with the propositions from Pacheco et al. (2010) and Djupdal and Westhead (2015) in sustainability-driven entrepreneurship literature and similar to previous findings in conventional entrepreneurship (Rao, 1994; Suchman, 1995), this research argues that sustainability-driven entrepreneurs use self-imposed regulations, such as third-party certification and awards, to secure their identities from fake claims and enhance their legitimacy. Sustainability-driven entrepreneurs use formal and informal regulations and institutional frames to create standard procedures to distinguish their new network from other trends in their socio-technical system. They use these formal and informal norms to decrease uncertainties and create a predictable tie with actors that are keen to establish connections with these new trends. They may utilize third-party certification to leverage their claims (Djupdal & Westhead, 2015); however, as it will be discussed in Section 7.3,

the effectiveness of the latter strategy is conditioned by the legitimacy of third-party certifiers; the more valid and trustworthy certification may create a wider influence. These strategies might be more important in an environment with high volatility where the level of trust, created by other sources, is lower and interactions are usually based on temporary ties. Hence, sustainability-driven entrepreneurs, as one of their roles in wider systemic changes in their socio-technical system, employ self-imposed regulations to legitimize their actions and enhance the level of trust among salient actors in their business environment.

By far, the most important role of sustainability-driven entrepreneurs, which creates a higher level of impact on alteration of norms and institutions at the system level in their socio-technical systems, is their role in the formation of collective actions. Similar to arguments in previous research by Pacheco et al. (2010) and Pinkse and Groot (2015), the findings in this research demonstrate that sustainability-driven entrepreneurs use their social skills to facilitate collective actions, mobilize resources, and bring about institutional change. Sustainability-driven entrepreneurs are usually not experienced enough and do not have enough resources to have institutional influence individually (Pinkse & Groot, 2015), hence these collective entities enable them to pursue their objectives, using resources that become available through different actor groups. As the findings in this research show (Sections 5.3.2.2.7, 6.3.2.2.4, and 6.3.2.2.5) they may aim to change the norms among consumers or lobby to pass formal legislations. It seems that in all these situations passion and commitment of some proactive entrepreneurs for lobbying and bringing different actor groups together is a crucial factor for success. Yet, this argument is conditioned to different situational factors that make it subjective to the context of study and other criteria, such as personal characteristics of entrepreneurs and legitimacy of their new practices. However, if these situational conditions came true and new networks at the niche level transform their collective action to a formal identity, as the findings in the wine industry demonstrate, they officially inform other stakeholders about the emergence of their new niche. This new entity enhances their cognitive legitimacy and escalates their sociopolitical power in negotiations with salient actors in their socio-technical system. Hence, addressing the first research question in this thesis, this research argues that some proactive sustainability-driven entrepreneurs may act as institutional entrepreneurs (Fligstein, 1997; Pacheco et al., 2010). They use their social skills to join different actor groups, mobilize resources, and lobby for their communal goals. This

collective enactment enhances their sociopolitical legitimacy where they can change regulations and change the dominant institutional logic in their favor.

In summary, similar to previous literature, the findings in this thesis suggest that sustainability-driven entrepreneurs enhance their institutional embeddedness through partnership with like-minded people and creating demand for supporting institutions. They use self-imposed regulations to regulate relationships among themselves and other actors in their socio-technical systems, and third party certification may be employed to leverage their claims and lower the uncertainties in these interactions. Sustainability-driven entrepreneurs, similar to conventional entrepreneurs, may use storytelling and rituals to convince consumers. Yet, a finding that is unique for sustainability-driven entrepreneurs shows that these entrepreneurs actively share information with like-minded people. This information sharing may follow a different logic compared to conventional business models where they protect their identities through legislations such as trademarks and patents. Information sharing and collective learning help sustainability-driven entrepreneurs to save resources and eventually may result in a dominant design. Sustainability-driven entrepreneurs also role model for skeptical actors. Their legitimate organizational forms, along with their strong commitments to their social and environmental goals, challenge the taken-for-granted assumptions among actors in their socio-technical system and encourage them to reevaluate their actions. As a result of these strategies, networks of actors adopting new organizational forms grow and stabilize. With this growing population sustainability-driven entrepreneurs might aim to change the rules and institutions in their socio-technical systems. It seems that some proactive entrepreneurs may initiate collective actions and become institutional entrepreneurs. This trend institutionalizes the procedures among the emerging niche and facilitates transitions in their socio-technical system.

7.2.3 Roles and Strategies for Articulation

Finding a shared vision and reaching a dominant design eases the learning process and facilitates the cooperation among sustainability-driven entrepreneurs. It is an important stage in the formation of a niche network and co-evolution of socio-technical systems (Abrahamson & Fairchild, 2001; Aldrich & Baker, 2001; Berkhout et al., 2004). This shared vision should form along different dimensions such as technology, cognitive rules, and social norms (Kemp et al., 1998; Lopolito et al., 2013). It takes place when stakeholders

reach an agreement upon architecture and a set of components forming a product or service (Aldrich & Baker, 2001). Reaching a dominant design and a shared vision is dependent on cooperation of social actors and support from powerful organizations (Abrahamson & Fairchild, 2001). Before agreement on a shared vision, a period of ferment occurs where different variations of an innovative approach come into existence. This stage might be followed by a period of incremental change where interactions between the selection environment and strategic choices of entrepreneurs create an environment for refinement and debate that might result in an agreed design and perspective (Abrahamson & Fairchild, 2001). As discussed in the previous section, while finding shared visions and collective cognitive rules outline specific directions for learning (Berkhout et al., 2004; Geels & Raven, 2006), in turn, learning advances knowledge about new practices and enhances the shared meaning among actors in socio-technical systems (Brown et al., 2004; Geels et al., 2008). Positive feedback from learning creates general and abstract rules and refines expectations among the actors (Geels & Raven, 2006). This cyclic process transforms the local outcomes into more general abstract rules that require aggregation activities such as standardization, codification, model-building, and documentation of best practices (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006; Geels & Raven, 2006). The findings in this research demonstrate that the sustainability-driven entrepreneurs play a variety of roles in this process and facilitate transitions in their socio-technical systems, as summarized in Table 7-7 and further discussed in this section.

Table 7-7 Strategies for articulation in the two case studies and their theoretical implications

	Findings	Implications
Retail	• Complexity and lack of consensus around the definition of ethical and green consumerism	• Results in different variations based on interpretations and personal preferences and creates obstacles against consensus making (Brown et al., 2004)
	• Involvement of different stakeholders with diversity of worldviews and interpretations	• Challenging to find a common ground and a shared vision
Wine	• Sharing experiences and mistakes during information sharing	• Creating shared meaning that results in dominant design through collective learning
	• Leading collective actions and lending support to new organizations	• Facilitating collective actions through leaderships and vision making • Creating a direction for resource mobilization at collective level
	• Participating in setting standards for their new practices	• Articulating clear definitions of their practices and defining the boundaries between their new niche and more established trends

The discussion on the above-mentioned findings offers new insight about entrepreneurial roles in articulation of meanings and expectations. As shown in Table 7-8, this research suggests three main roles for sustainability-driven entrepreneurs in this regard. It clarifies that these roles are influenced by the personalities of entrepreneurs, nature of their innovative approaches, and contextual conditions.

Table 7-8 Roles and strategies for articulation and a cross-case comparison

	Contribution and Comparison
1	• Sustainability-driven entrepreneurs may create vision for new institutions representing their organizational forms at collective level.
2	• Sustainability-driven entrepreneurs may participate in setting standards and defining the boundaries between their organizational forms and other trends in their socio-technical system.
3	• It seems that for new practices with priorities for social dimensions, the process of consensus-making is complex, which is influenced by local norms and wider changes at the landscape level.

Despite the fact that articulation of meanings and expectations is identified as a crucial factor for formation of a new niche and wider influence of entrepreneurial actions (Schot & Geels, 2008), previous literature in sustainability-driven entrepreneurship has not paid enough attentions to entrepreneurial roles in this regard. Creating a shared vision among diverse stakeholders in socio-technical systems objectifies the goals for niche development and facilitates planning (Fuenfschilling & Truffer, 2014; Romanelli & Schoonhoven, 2001) that enables actors to make better decisions via their strategic choices. The reader may allege that finding a shared vision is one of the outcomes of previously-mentioned arguments. While this can be the case for activities such as information sharing and collective learning that may result in a dominant design, the findings in this research demonstrate that sustainability-driven entrepreneurs may directly facilitate consensus-making by their leadership roles at the collective level.

The findings in this research indicate that some of the proactive sustainability-driven entrepreneurs, besides participation in collective actions (see Sections 5.3.2.2.7 and 6.3.2.2.5), may intentionally attempt to guide their emerging networks. These individuals as knowledgeable people, who are passionate about their social and environmental goals, commit time and other resources to set goals and create directions for their collective action. Similar to conventional entrepreneurs (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006), the sustainability-driven entrepreneurs may get involved in

setting standards for their new practices (see Sections 6.3.2.3.1 and 6.3.2.3.3), which influence the validity of the new organizational forms among other legitimate trends by setting boundaries and abstracting rules. They would become institutional entrepreneurs that pursue their goals through collective actions, using their social skills to organize collective entities and find wider sociopolitical influence.

However, it seems that the effectiveness of entrepreneurial roles varies for practices with priorities for social aspects compared to the ones with more technologically-oriented dimensions. While for the latter sensible and observable outcomes ease the debate among actors and facilitate the articulation process, for the former the subjective meanings and diverse interpretations of participants involved in social interactions make the articulation process messy and conditioned to cooperation of different stakeholders. Moreover, the process of consensus-making and articulation for social phenomena may vary based on social, cultural, and institutional logics in different locations. Hence, the emergent shared vision from a comparable variation could vary based on local interpretations (Abrahamson & Fairchild, 2001). Consequently, it seems that consensus making for socially-oriented actions may depend on wider agreements at the landscape level where broader social and cultural change may bend the selection criteria to particular activities. This notion leaves a lower level of influence for individual entrepreneurs in the process of consensus making in activities with priorities for social dimensions.

Addressing the main research question in this thesis, these rationales show that some of the sustainability-driven entrepreneurs may facilitate wider systemic changes in their socio-technical system by their leadership role and their participations in setting standards for their new practices. They create visions and define direction for collective action that institutionalizes the trends in their emerging niche. Creation of united actions, along with stronger identities, leverages the influence of their collective enactment and facilitates the process of niche regime translation. Yet, this role of sustainability-driven entrepreneurs is conditioned to personal and environmental conditions, which is not generalizable to the population of entrepreneurs. Further research about personality of entrepreneurs and environmental conditions that encourage these leadership roles among entrepreneurs is required.

7.3 Key Socio-economic Factors Influencing Entrepreneurial Actions

This section discusses how different criteria change the dynamics between creating a legitimate organizational form and gaining external legitimacy by influencing the double-loop learning in niche-regime translation. As discussed in the previous sections, sustainability-driven entrepreneurs use different strategies and play a variety of roles to carve their new organizational forms and enhance their cognitive and sociopolitical legitimacy. Their actions may facilitate the formation of a robust niche that may eventually translate into dominant regimes and change the norms and institutions in their socio-technical systems towards a more sustainable system of production and consumption. However, the effectiveness of entrepreneurial actions is mediated by a diverse range of socioeconomic criteria (Brown & Vergragt, 2008; Lopolito et al., 2013). These factors influence the double-loop learning, which is a process necessary for niche-regime translation. Double-loop learning occurs when feedback from dominant trends is not positive and performance criteria do not meet the expectations of salient actors. In such situations actors reevaluate their norms and change them to legitimate alternatives, if necessary (Argyris, 1976; Brown & Vergragt, 2008; Brown et al., 2004). The influential factors can either facilitate the learning process or create lock-ins in status quo (Brown & Vergragt, 2008; Kemp et al., 1998). For example, regimes externalities and landscape variations may create opportunities or threats for de/stabilization of current regimes or emerging niches (Bergek et al., 2008; Turnheim & Geels, 2013). Likewise, social characteristics and cultural norms highly influence the wider validation of new organizational forms (Abrahamson & Fairchild, 2001). The influential factors that were discussed in the two case studies are summarized in Table 7-9 and further discussed in this section.

Table 7-9 Contextual factors influential in entrepreneurial roles and strategies in the two case studies and their theoretical implications

	Findings	Implications
Retail	• Regime externalities such as poor quality of life among producers and resource depletion	• Question the adequacy of current regimes and creates windows of opportunities for breakthrough of new practices (Turnheim & Geels, 2013) • Encouraging actors to reevaluate their norms and assumptions
	• Strong norms such as shareholder profit maximization and vested interest of powerful actors at the regime level	• Large inertia towards stabilization of current regimes
	• Institutionalized habits among consumers such as tendency towards cheapest possible price	• Create lock-ins, encouraging actors to stick to status-que
	• Gradual changes at the landscape characteristics such as growing awareness among consumers	• Create windows of opportunities and facilitate regime destabilization
	• Endorsements of new philosophies by salient stakeholders such as universities, city councils, and religious groups	• Connects new philosophies to more legitimate institutions and send legitimacy signals to actors who share the same logic with those institutions
	• Promotion of new philosophies in the mass media such as Newspapers and TVs	• Wider access to information about new trends inspire actors to change their taken-for-granted assumptions and enhance the cognitive legitimacy of the new philosophies in broader context at the landscape level (Aldrich & Baker, 2001)
	• Word of mouth in Dunedin	• Stronger ties, compared to bigger cities, among people in this social setting enhance the level of trust
	• Legitimate third party certifications	• The more trustworthy third party certifiers may create a wider influence in business environment by reducing uncertainties with more legitimate certifications (Djupdal & Westhead, 2015)
	• Complexity of networks in retail sector	• Developing institutional embeddedness is a great barrier in complex socio-technical systems (Agarwal & Shah, 2014)

	Findings	Implications
Wine	• Ineffective usage of chemicals, water, energy, and land	• Destabilize current trends that encourage dominant actors to reevaluate their actions
	• Wine producers in New Zealand are reliant on international markets and they gain a competitive advantage using green and clean image of this country	• Pressure on stakeholders in this industry to take actions and maintain this image, while it creates windows of opportunity for socially and environmentally practices at the niche level to break through dominant regimes
	• Positive financial outcomes from adoption of new practices	• Send legitimacy signals to other stakeholders and facilitate the process of validation for those actions • Opportunities that positively response to important institutional norms at socio-technical systems, while simultaneously have social and environmental benefit, are easier to validate
	• Better quality of products for some of the new practices	• Creating added value for salient actors that facilitates legitimacy making
	• Degree of departure and dimensions of departure	• The further the distance between new trends and dominant norms the more justification and positive feedback are required
	• Legitimate third party certifications	• The more trustworthy third party certifiers may create a wider influence in business environment by reducing uncertainties (Djupdal & Westhead, 2015)
	• Policies	• De/stabilizing current trends or new niches • Policies in support of current trends stabilize existing institutional logics and encourage incremental improvements rather than fundamental changes that are necessary for some of the sustainability issues • Policies in support of new practices may open up windows of opportunity for a breakthrough of new trends

The above-mentioned findings are discussed in this section along with a cross-case comparison that may offer a better understanding about the influence of contextual conditions on entrepreneurial roles and wider impacts of their actions. While previous literature on sustainability-driven entrepreneurship has addressed some of these criteria, further explanation highlights the contributions in this research as shown in Table 7-10.

Table 7-10 Summary of the discussion for influential factors on entrepreneurial strategies

	Contribution and Comparison
1	• Wider influence of entrepreneurial actions is dependent on characteristics of socio-technical systems and nature of their innovative approach.
2	• Entrepreneurial actions are more effective in socio-technical systems that regime externalities are along with wider changes at the landscape level.
3	• Support from salient actors, promotion of new philosophies in mass media, and policies in support of new practices may alter the trends at the landscape level and bend the selection criteria in favor of new organizational forms.
4	• Support from media gatekeepers and salient actors have a higher importance for entrepreneurial actions that are inclined towards social dimensions compared to the ones with more technological aspects.
5	• Entrepreneurial actions are more effective in socio-technical systems with higher level of trust, lower level of complexities, and less dependencies to other systems.
6	• Justifications for practices that have major departures from cultural norms and cognitive assumptions are more challenging, as considerable amount of positive feedback should be experienced by salient actors to consider new practices as valid alternatives for their taken-for-granted assumptions.
7	• Wider influence of entrepreneurial actions can be facilitated if their actions create added values for salient actors and address the institutional constraints in their socio-technical systems.
8	• Redefining sustainability innovation is necessary for future research to move from dyadic paradigm, considering sustainability logic against economic norms, by incorporating the multidimensional and multifaceted nature of sustainability.

Theory suggest that regime externalities create doubts about adequacy of dominant trends in socio-technical systems and form windows of opportunity for alternative approaches at the niche level (Bergek et al., 2008; Lopolito et al., 2013; Turnheim & Geels, 2013). Likewise, the findings in this research, discussed in Sections 5.1.1 and 6.1.1, such as poor quality of life among producers and ineffective usage of chemicals, water, energy, and land indicate similar patterns in the two case studies. Moreover, this research clarifies

that influences of these externalities are mediated by accompanying factors such as broader changes at the landscape level and external support from salient actors. Characteristics such as having a competitive advantage in green and clean image of New Zealand or change in value models of consumers in the retail sector may create a sense of urgency and leverage the influence of regime externalities. On the other hand, policies, imposed by decision makers at the system level may play a double edge sword; either by supporting current trends and dismissing the underlying issues causing social and environmental degradation, which lead the changes towards incremental improvements; or by supporting new trends, which creates windows of opportunities for new practices. Hence, addressing the research question related to influential socioeconomic factors, it seems that entrepreneurial strategies are more effective in socio-technical systems where regime externalities are accompanied with more fundamental changes at the landscape level in support of the alternative trends.

Extending the previous argument, the findings suggest that support from salient actors may change the dynamics in niche-regime translation by altering the trends at the landscape level. For example, information gate keepers such as newspapers and mass media can significantly lead the public opinions and shape their viewpoints towards new trends that may eventually change the selection criteria in favor of new organizational forms. Likewise, support from actors that are connected to more legitimate institutions enhance the level of trust towards new philosophies. For example, connections with institutions such as universities and churches that are strongly recognized by other actors as legitimate, associate these new trends with more established identities. Hence, actors who share the same logics with those organizations or considered such identities as legitimate may reevaluate their taken-for-granted assumptions and adopt new practices as valid alternatives for their current choices. Pastakia (1998) has pointed out a similar finding and argues that harnessing the credibility from such salient institutions can become a strategic choice for entrepreneurs. In response to the third research question in this thesis, it seems that support from information gatekeepers and salient actor groups may bend the selection criteria at the landscape level towards new philosophies that may create windows of opportunity for breakthrough of new trends and facilitate systemic changes in socio-technical systems. Moreover, a comparison between the two case studies and number of themes in the results chapters (Sections 5.3.3.1, 5.3.3.2, and 6.3.3.5) suggests that support from salient actor groups and information gatekeepers

may find a higher importance for social dimensions compared to technological aspects. Since learning for social dimensions take place in social interactions and meanings emerge as a result of negotiations among diverse actor groups, support from salient actors influences the outcomes of these negotiations. It offers visions and creates a moral support that may lead the outcomes of negotiations in favor of entrepreneurial actions. Hence, it seems that entrepreneurial actions inclined towards social dimensions are more reliant to support from salient actors who can alter the trends at the landscape level.

As discussed before trust play a significant role for entrepreneurial success (Aldrich & Ruef, 2006; Drori & Honig, 2013). Likewise, the findings in this research indicate that when sociocultural characteristics of entrepreneurial contexts offer a higher level of trust, entrepreneurial strategies are more effective for wider systemic changes in their socio-technical systems. For example, regional structure of the wine industry and stronger ties among actors in one region offer such advantage. Likewise, trustworthy relationships and word of mouth among people in Dunedin city cut the uncertainties in interactions among actors and create a more reliable environment. As such (it was also discussed in the previous sections) when relationships in a socio-technical system suffer from lack of trust and subjected to uncertainties, sustainability-driven entrepreneurs may employ strategies to establish trustworthy relationships. For example sustainability-driven entrepreneurs may use third party certifications or credibility gained from green awards and competition to cut the level of uncertainties, which is aligned with the previous literature (Djupdal & Westhead, 2015). Yet, the findings in this research add a new dimension to these arguments. The findings, as discussed in Sections 5.3.3.4 and 6.3.3.4, suggest that effectiveness of these strategies is highly dependent on legitimacy and popularity of those supporting institutions. Doubt about the credibility of certifications and awards and lack of knowledge about what they stand for dismiss the reasons behind the strategic choices of sustainability-driven entrepreneurs. Referring back to the research question about influential socioeconomic factor in wider systemic changes, it seems that socio-technical systems with higher level of trust provide a more fruitful context for entrepreneurial actions and entrepreneurs strategies may find wider influence in such systems.

Moreover, this research argues that complexity of the context and diversity of actors in socio-technical systems challenge the system building activities and hinder the development of new networks in entrepreneurial process. While previous research shows

that a higher level of diversity encourages creativity and eases the entrepreneurial actions for creation of variations (Aldrich & Martinez, 2015), the findings in this research suggest that complexity of interactions lower the effectiveness of entrepreneurial actions, as individuals, in system building and creating wider systemic changes in their socio-technical systems. This argument is aligned with the previous finding of Klein Woolthuis (2010) that suggests; system building strategies is more probable to occur in contexts that voluntary attention to sustainability is encouraged and less probable when context is complex and uncertain. This notion challenges the wider influences of entrepreneurial actions in more complex socio-technical systems. It seems that higher level of complexity in socio-technical systems create larger inertia towards dominant trends and lower the influence that individual actors such as entrepreneurs may play in fundamental changes that are required for sustainability transitions. It imposes a higher risk on viability of sustainability-driven entrepreneurs; since development of supporting networks in these complex systems is difficult, which makes resource mobilization problematic. Addressing the influential factors on entrepreneurial actions in wider systemic changes, this research suggests that entrepreneurial actions have wider influence in socio-technical systems with lower level of complexities and fewer dependencies to other systems.

On the other hand, similar to the previous findings by Pastakia (1998), this research suggests that nature of entrepreneurial opportunities, degree of departure from dominant institutional norms, and added value for salient actors in socio-technical systems highly influence the wider effect of entrepreneurial roles. It seems that entrepreneurial opportunities that address social and environmental opportunities and simultaneously response to institutional constraints in their socio-technical system are easier to find validations. This may initiate from different types of entrepreneurial opportunities that are positioned in a spectrum between locative and creative (Kirzner, 1997; Knight, 1921; Schumpeter, 1934). It seems that exploitation of entrepreneurial opportunities that are inclined towards the locative dimension, are easier to find legitimacy, while opportunities that are created by entrepreneurs, based on different institutional logics to current trends and favor the creative aspects, may need further justifications and impose a higher risk on sustainability-driven entrepreneurs. The findings in this research suggest that considering the multidimensionality of sustainability and sustainability innovation the boundary between locative and creative perspectives has become fuzzier than ever before. It seems that previous literature offers a simplified

version of societal systems opposing sustainability logics against economic norms that does not resonate a comprehensive picture of situations. Entrepreneurial opportunities may partially respond to dominant norms and institutions and simultaneously have major departures in other dimensions such as social, cultural, political, and/or technological that address sustainability issues. Hence, this research suggests that sustainability-driven entrepreneurship literature needs to redefine entrepreneurial opportunities and move from duality of economic vs sustainability paradigm to incorporate the complexities associated to sustainability concept. Furthermore, aligned with previous literature, the findings show that the further the distance of new practices from current norms and institutions in socio-technical systems the more justification is required and more positive feedback should be experienced by dominant actors at regime level to consider new practices as legitimate alternatives for their taken-for-granted assumptions. Association of new practices with added values for salient actors that use such services or products may facilitate their adoption (Westley et al., 2011), which is aligned with propositions by Abdelkafi and Täuscher (2015). Although the perceptions from value and disvalue are subjective (Jolink & Niesten, 2015) and vary based on location, time, and socio-cultural norms. Hence it can be concluded that new practices that by nature offer added value to salient actors in local settings would be easier to accept and find validations among other actors.

In summary, the findings demonstrate that wider influence of sustainability-driven entrepreneurs' actions is dependent on contextual characteristics of their socio-technical systems and nature of their innovative approach. It seems that entrepreneurial actions are more effective in socio-technical systems with higher level of trust, lower level of complexities, and less dependencies to other systems. Moreover, the influence of their actions is mediated by broader changes at the landscape level, where for example support from salient actors and policy makers may bend the selection criteria to their favor. Furthermore, it seems that nature of their actions such as dimensions and degree of departures from current norms and institutions may alter the outcomes of their activities. Entrepreneurial opportunities that have major departure from current norms and institutions require a considerable amount of feedback to justify their actions. These opportunities demand further effort to find cognitive and sociopolitical legitimacy, which imposes a higher risk on sustainability-driven entrepreneurs. This risk can be mediated by creating added values for salient actors and addressing institutional constraints in current

socio-technical regimes. It seems that literature in this area needs to redefine sustainability innovations and move from the sustainability vs economic paradigm to consider the multifaceted nature of sustainability and create a more comprehensive picture about entrepreneurial actions.

7.4 The Actor Groups in Sustainability-driven Entrepreneurship Processes

As discussed earlier, entrepreneurial success is dependent on effectiveness of relationships between entrepreneurs and actors in their business environment (Schlange, 2006a; Walley & Taylor, 2002). Entrepreneurs, as one of their main roles, have to identify salient actor groups and establish new connections to gain resources and claim credibility (Schlange, 2006a; Spence et al., 2011). Since sustainability-driven entrepreneurs attempt to create values in multiple dimensions of socio-technical systems they may need to deal with broader ranges of actors, compared to conventional entrepreneurs (Schlange, 2006a). The actors' groups, identified in the entrepreneurial process, in the two case studies in this thesis are summarized in Table 7-11.

Table 7-11 Different actor groups in the two case studies and a cross-case comparison

Retail		Wine	
Salient actors	Themes	Salient actors	Themes
Consumers	5	Other producers and wine makers	7
Producer groups	3	Trade association	3
Distributors	3	Governance	2
Third party authorities	2	Third part authorities	2
NGO's, religious groups, Universities and City councils	2		
Likeminded businesses	1		

The investigation of actors in the two case studies demonstrates how different actors' groups were important for wider impacts of entrepreneurial strategies and offers new insight about entrepreneurial actions. These arguments are summarized in Table 7-12 and further discussed in this section to address the research question and clarify the differences between entrepreneurial actions with different priorities towards social and environmental dimensions.

Table 7-12 Summary of the discussion for actors involved in entrepreneurial strategies

	Contribution and Comparison
1	• It seems that entrepreneurial strategies are inclined towards salient actors who experience a higher level of newness and uncertainty regarding new practices.
2	• Support from salient actor groups such as NGO's, universities, and religious groups are more important for innovations inclined towards social dimensions.
3	• The national identity of New Zealand as a clean and green country have attracted more attention from governmental and political actors.

The findings in this research demonstrate that in the both case studies sustainability-driven entrepreneurs employ more strategies towards the actors who experience a higher level of newness and uncertainty with regards to their new practices. In the retail sector, as sustainability-driven entrepreneurs were introducing new ranges of products into market, more strategies are inclined towards consumers group, while in the wine industry, as sustainability-driven entrepreneurs were having new procedures and philosophies at the production side, more strategies were employed towards producers group. Theory suggest that the biggest threat for nascent entrepreneurs is lack of cognitive legitimacy (Aldrich & Fiol, 1994), which restrict the access to resources (Suchman, 1995). Addressing the research question in this thesis, the combination of actors that were involved in entrepreneurial strategies shows that a high propriety is given to gain cognitive legitimacy among the actors who experience a higher-level uncertainty related to sustainability-driven entrepreneurs' actions. These strategies help sustainability-driven entrepreneurs to gain cognitive legitimacy and find access to scares resources.

Moreover, a comparison between entrepreneurs with different priorities for social and environmental dimensions indicates a higher level of involvement from NGO's, universities, and religious group in the former group. Support from these salient actors with high level of legitimacy, leverage the impact that sustainability-driven entrepreneurs can play in their business environment (Schlange, 2006a). As discussed in the previous section, these influential organizations play a significant role in directing wider changes at the landscape level that may create windows of opportunity for breakthrough of new practices. It creates vision for social learning that takes place among diverse range of actors with different worldviews and facilitates consensus making that eventually results in new meanings and collective identity among the stakeholders involved. On the other

hand, formal industry structure and involvement of governmental organizations were highlighted in the wine industry. It seems that the national identity around the wine industry of New Zealand, compared to the retail sector in general, and competitive advantage of this industry with regards to green and clean image of this country have attracted more attention from decision makers and governmental groups. Hence, presence of political actors and governmental organizations are more influential in this case study.

In summary, investigation of actors involved in entrepreneurial process and comparison between the case studies suggests that sustainability-driven entrepreneurs emphasize actors that experience higher levels of uncertainty regarding their new practices. Moreover, it seems that support from legitimate organization at the landscape level may play a crucial role for social learning in socio-technical systems. Legitimate institutions such as universities, churches, and NGOs can create directions for discussions among various stakeholders and facilitate consensus making among the actors at the landscape level. As discussed in the previous sections these changes at the landscape level, in support of new trends, destabilize current regimes and create windows of opportunities for breakthrough of new practices. Furthermore, it seems that national identity of the wine industry and its competitive advantage in clean and green image of New Zealand encourages political interference, hence presence of governmental and political actors was more influential in the second case study. It seems that a more structured organization in this industry and stronger ties among the actors may facilitate policy making procedures. Next section concludes the previous discussions and presents them in a coherent with four distinct contributions.

7.5 Contributions and Concluding Thoughts

This section concludes the preceding discussions and synthesizes them into a coherent whole. It highlights the contributions of this research to the extant body of knowledge on sustainability-driven entrepreneurship. These contributions are presented in the following order: (1) a model of niche development focusing on entrepreneurial roles; (2) sustainability-driven entrepreneurs' roles in emergence of new organizational forms; (3) sustainability-driven entrepreneurs' roles in diffusion, validation, and consensus; and (4)

the relevance of two mediating factors, namely the socio-technical context and the nature of the innovative approach.

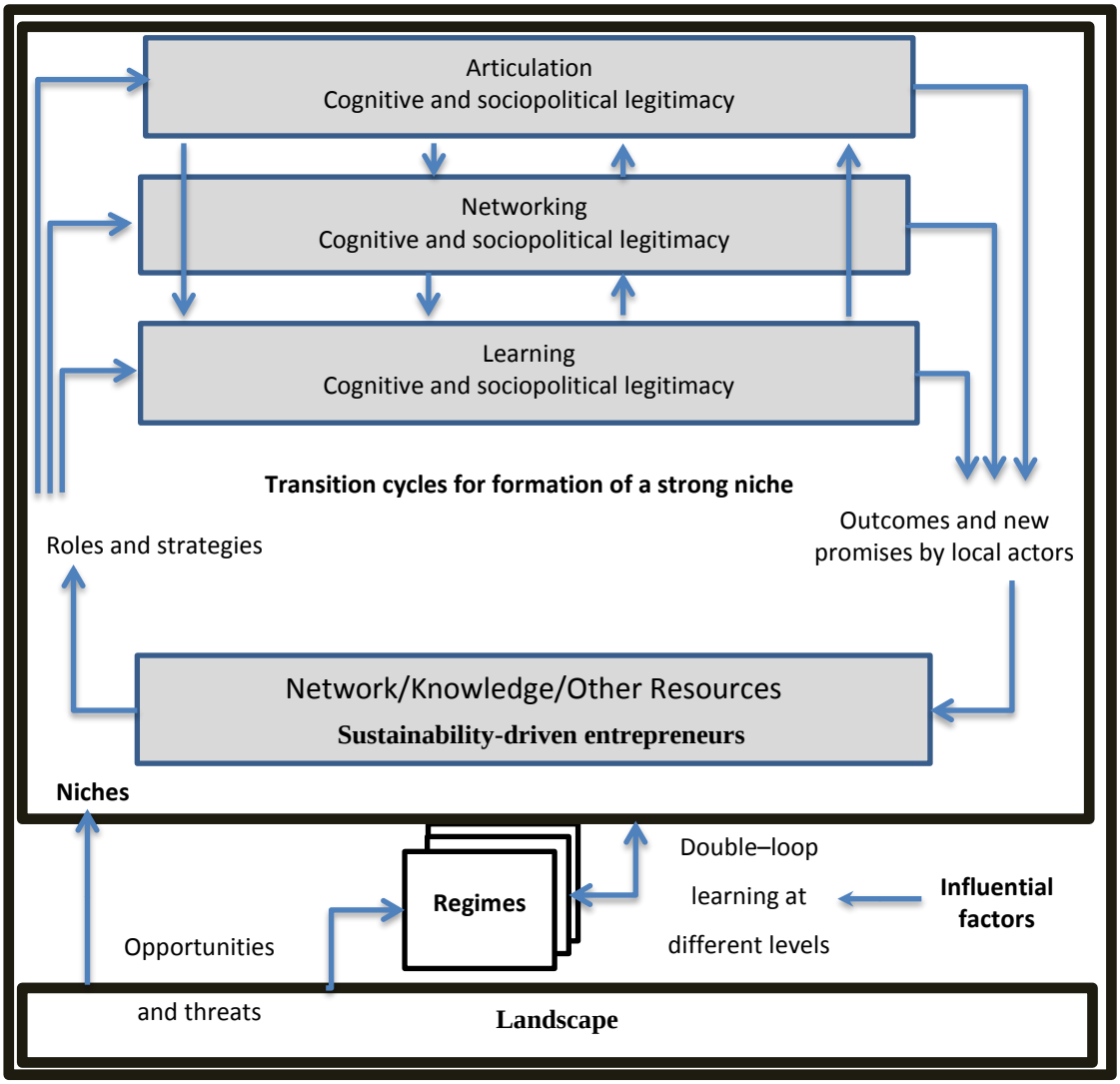
7.5.1 First Contribution: A Model of Niche Development Focusing on Entrepreneurial Roles

Sustainability-driven entrepreneurs recognize sustainable opportunities and then develop new solutions using organizational logics, different from the dominant norms, to address their social and environmental objectives. They design new organizational forms (such as "biodynamic wine producers") by building an organizational template and theorizing an explanation for why this particular template makes sense as a solution to the opportunity they have reframed (Aldrich & Ruef, 2006; Zhang & White, 2016). They then work to legitimize the new form through interactions with the dominant institutional logics at the regime level, justifying their actions to highly salient actors (Aldrich & Ruef, 2006; Schlange, 2006a). It seems that the wider influence of entrepreneurial actions is an outcome of the co-evolution of internal legitimacy, as validity of their values and new organizational forms, and external legitimacy, occurring through diffusion and consensus among wider actors in their socio-technical systems. While the values and intentions of the sustainability-driven entrepreneurs play a crucial role for giving direction (towards sustainability) to their new institutional logic (Schlange, 2006b; Shepherd & Patzelt, 2011; Walton & Kirkwood, 2013), the findings in this research demonstrate that there is a clear relationship (detailed in the next three sections) between what they can organize within their business as their organizational forms and how they can institutionalize it in diverse external institutional fields in their business environment. Hence, these two entities co-evolve and while entrepreneurs introduce their new practices, driven by their values, they have to revise those values based on feedback received from their previous actions.

This co-evolutionary relationship takes place through transition rounds (Schot & Geels, 2007; Smith, 2007), which may form a new niche that eventually facilitate wider changes in the socio-technical system. Sustainability-driven entrepreneurs, while engaging in development of their novel organizational forms, use diverse strategies to enhance their cognitive and sociopolitical legitimacy. As one of the contributions this research suggests a model, represented in Figure 7-3, for niche development emphasizing on entrepreneurial actions. This model has been created by a new combination of Evolutionary theory of Organizational Change and Sustainability Transition literature;

including Multi-Level Perspective and Strategic Niche Management. The model was tested in the two case studies in this thesis and the results were presented in the previous chapters. Yet, further investigations of this model with bigger number of case studies and more longitudinal data are required to refine and generalize the model and suggest a process model for niche development and niche regime translation focusing on entrepreneurial roles.

Figure 7-3 The suggested model for niche development and niche regime translations focusing on entrepreneurial roles



Considering the proposed model and align with the findings from Tracey et al. (2011) and De Clercq and Voronov (2011), this research confirms that organizational legitimacy is a product of actions that are continually reproduced and reconstructed by sustainability-driven entrepreneurs in harmony with external legitimation activities in transition cycles. Consequently, sustainability-driven entrepreneurship can be defined as a dynamic

process where sustainability-driven entrepreneurs move iteratively among different institutional arrangements. While sustainability-driven entrepreneurs attempt to externally legitimate their novel organizational form, they are simultaneously refining their internal schemata by the feedback they receive from their business environment. These procedures gradually develop a network aligned with the new organizational logic and institutionalize them through time. This argument indicates that future research, investigating sustainability-driven entrepreneurs as change makers, needs to investigate entrepreneurial actions within their context to present a full picture of situations. Otherwise, the abovementioned dynamics are not fully considered. Further research is required to clarify how interactions between internal and external legitimacy work and how entrepreneurial actions are influenced by these interactions. Therefore, this research suggests that:

> ***Sustainability-driven entrepreneurship is a dynamic process that co-evolves through interactions between internal and external legitimacy of new organizational forms. To study how sustainability-driven entrepreneurship may address social and environmental problems in socio-technical systems, research should contextualize entrepreneurial actions and consider both external and internal causes of legitimacy, because sources of legitimacy and its associated practices are instigated both within the organization and in its external environment.***

7.5.2 Second Contribution: Sustainability-driven Entrepreneurs' Roles in Emergence of New Organizational Forms (Internal Legitimacy)

Aligned with previous research (Jolink & Niesten, 2015; Schick et al., 2002; Schlange, 2006b; Shepherd & Patzelt, 2011; Silajdžić et al., 2015), the findings in this thesis show that a mixture of social and environmental goals combined with emotion, gained through life experiences and social interactions, lead sustainability-driven entrepreneurs to pursue their goals in a business setting. The findings show that all the sustainability-driven entrepreneurs in this study are strong believers in their new practices. They see their businesses as a means to an end, which is sustaining the environment and social system.

The strong motivation of sustainability-driven entrepreneurs is an important component of gaining internal legitimacy (Jolink & Niesten, 2015; Schlange, 2006b; Silajdžić et al., 2015), as they provide the organizational lubricant for individual action. Hence, confirming

the previous findings and similar to conventional entrepreneurs (Cardon, Gregoire, Stevens, & Patel, 2013; Cardon et al., 2009), this research suggests that the motivations of sustainability-driven entrepreneurs will probably reflect both their value creation strategies and the criteria by which they evaluate the outcomes of their actions. Yet, further research about sustainability-driven entrepreneurs is required to investigate how motivations of these people are different from conventional entrepreneurs and how their personalities, previous life experiences, and emotional attachments to their social and environmental values may influence their decisions to exploit sustainable opportunities.

The model, explained in the previous section, demonstrates how legitimacy is constructed and institutionalized in a socio-technical system. It justifies how the evolution of socio-technical systems shapes sustainability-driven entrepreneurs' capacity for action in particular situations and vice versa, how entrepreneurial actions may initiate wider systemic changes in those systems. The findings in this thesis show that sustainability-driven entrepreneurs may make strategic decisions to move from (on the one hand) confirming the dominant norms and institutions at the regime level to sustain their viability, to (on the other hand) adopting an opposing position and employing proactive strategies to bend the institutional environment to their favor. Consequently, aligned with the findings from Poldner et al. (2015) and Gibbs and O'Neill (2014) this research suggests that sustainability-driven entrepreneurship is a hybrid phenomenon where associated organizational forms evolve through improvisation and bricolage. Sustainability-driven entrepreneurs may employ different institutional logics during transition cycles to address the constraints imposed by dominant rules at the regime level, maintaining their viability, while pursuing the sustainability objectives.

Sustainability-driven entrepreneurs use their available resources (in consideration of legitimacy signals from the external environment) to improvise new solutions. Having multi-faceted goals means that sustainability-driven entrepreneurs are continuously debating whether to follow the dominant rules without acting in the most sustainable manner, or being sustainable and possibly diminishing legitimacy and consequently loose access to resources. While previous literature simplifies this situation, and create a dyadic relationship between sustainability logic and profitability, the findings in this thesis suggest that future research has to include the complexities associated with the sustainability and employs a broader definition for entrepreneurial opportunities that

consider all aspects of life in a coherent whole. This new definition has to consider the fuzzy boundaries between sustainable and unsustainable opportunities while contextualizing them in broader local norms, rules, and institutions. Moreover, further research is required to clarify how sustainability-driven entrepreneurs balance their sustainability objectives with institutional constraints and move across different logics during the process of business development.

Detailing the abovementioned argument, the findings in this research confirm the previous literature in conventional entrepreneurship about learning and creating new organizational forms. It shows that similar to conventional entrepreneurs, sustainability-driven entrepreneurs find the initial knowledge and networks in their previous life experiences, while they build upon those capitals through processes of business development. Yet, the findings in this research clarify that the emotional attachment of sustainability entrepreneurs to their social and environmental objectives may hamper the learning process and enhance the risk of failure, as they may ignore legitimacy signals from external organizational fields and make decisions based on their personal biases and emotional attachments. Moreover, the findings suggest that more experienced entrepreneurs appear to be more effective in the process of learning and bricolage. While the business experience of sustainability-driven entrepreneurs may encourage them to conform to current norms and institutional logics (Aldrich & Ruef, 2006), it also empowers them to better understand the legitimacy signals from external organizational fields and choose more effective validation strategies. They can deliberately comply with some actors, while taking an opposing position against others. Hence this research argues that:

> ***Sustainability-driven entrepreneurship results in hybrid organizational forms that live through bricolage and improvisation. This process is influenced by complexities associated with sustainability concept and future research has to redefine entrepreneurial opportunities to consider all aspects of human life in a coherent whole. The findings clarify that entrepreneurial learning for bricolage and improvisation is influenced by emotional attachment, and business experience of sustainability-driven entrepreneurs. Further research has to investigate how personality, previous life experiences, and emotional attachments of entrepreneurs may influence the exploitation of sustainable opportunities and affect the learning process in further stages of development.***

7.5.3 Third Contribution: Sustainability-driven Entrepreneurs' Roles in Diffusion, Validation, and Consensus (Cognitive and Sociopolitical Legitimacy)

Sustainability-driven entrepreneurs, while adjusting their organizational forms based on feedback from the external institutional field, may take strategic actions to gain cognitive and sociopolitical legitimacy by changing the norms and institutions in their favor. Eventually, the outcomes of these strategies may result in wider systemic changes in their socio-technical systems towards a more sustainable estate of production and consumption. The findings in this research suggest that these roles and strategies can be categorized to: (1) system building and institutional entrepreneurship, (2) knowledge sharing and trust building, and (3) role modelling. While some of these strategies conform the previous literature and resonate similar strategies to conventional entrepreneurship, a few of them are unique to sustainability-driven entrepreneurs. These strategies are used along different dimensions of socio-technical systems (such as social, technological, and political) and target different groups of actors (such as consumer groups, likeminded businesses, NGOs, and governmental organizations). Influenced by their hybrid organizational form, this pro-activeness of sustainability-driven entrepreneurs varies based on their available resources and institutional constraints in different transition rounds.

Similar to most innovative entrepreneurs, sustainability-driven entrepreneurs should develop new networks and establish new connections to facilitate resource mobilization and gain institutional embeddedness (Aldrich & Ruef, 2006). Since previous institutional structures and dominant actors are not aligned with their philosophies, they need to create their own networks to connect production resources to consumers. Hence, as it has also been discussed in previous literature (Djupdal & Westhead, 2015; Klein Woolthuis, 2010; Pacheco et al., 2010; Westley et al., 2011; Zhang & White, 2016), one of the most prominent role of the sustainability-driven entrepreneurs in this research is identified as system building and institutional entrepreneurship. The findings in this research suggest that sustainability-driven entrepreneurs partner with like-minded people, create demand for supporting institutions, and enhance their institutional embeddedness through both push and pull factors. They exchange resources and information among their networks and an increasing number of such interactions develops their competencies and institutionalizes new procedures. This institutionalization facilitates the adoption process for late movers and may result in

development of a robust niche that may translate to the regime and facilitate wider systemic changes in socio-technical systems.

The findings show that, similar to conventional entrepreneurs (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006), proactive sustainability-driven entrepreneurs facilitate collective action among their newly-forming networks to pursue their communal goals. They commit time and other organizational resources to form coalitions with like-minded people and actors across their new niche to establish collective identities. These collective entities provide resources that otherwise were not accessible and enable these new niches to pursue their objectives through collaboration and consensus making. It seems that passionate characters of proactive entrepreneurs and their commitment to their sustainability goals create a strong driver for development of new networks and the formation of collective actions. Influenced by the cyclic process of internal–external legitimacy making, those organizational forms that have wider validations and stronger agreements among diverse stakeholder groups create more legitimate collective identities. In return, stronger collective identities may attract more attention, gain more resources, and find political influence. The findings suggest that connection with more stablished institutions and harnessing the support from salient social, political, and religious groups can become a part of entrepreneurial strategies through transition cycles.

If these collective actions find formality, by creating trade associations or other similar organizations, they can inform other actors in their socio-technical systems about the emergence of their new niche. They lobby with other salient actors to change regulations, set boundaries for their actions, and gain sociopolitical legitimacy. This research confirms the previous literature in this regard (Aldrich & Martinez, 2010; Aldrich & Ruef, 2006) and argues that some of the proactive sustainability-driven entrepreneurs offer visions and directions for collective organizations and may become involved in setting standards and creating abstract rules for their new niche networks. They create consensus among actors involved in these situations and facilitate the process of legitimacy making in broader scale, hence trigger wider changes across ranges of actors. These activities institutionalize the procedures and stabilize their actions where they can challenge the norms and institutional logic at regimes level (Aldrich & Ruef, 2006; Smith, 2007). Although, so far it is not clear how these proactive entrepreneurs and their motivations for these leadership

roles are influential in the formation of the new identities that further their social and political influences.

The other finding in this research shows that, as one of the main roles, sustainability-driven entrepreneurs facilitate information sharing and collective learning among interested actors. While traditional business models may protect their knowledge and their newly developed procedures with legal restrictions such as patents and trademarks (Aldrich & Ruef, 2006), sustainability-driven entrepreneurs are willing to share their knowledge and encourage other people to adopt the same practices. This is important because it starts to change the institutional fields to the point where it is easier to be seen as legitimate, therefore, there is a movement towards a sustainable transition. The findings show that the quality of information sharing is unique for sustainability-driven entrepreneurs, compared to their conventional counterparts. Moreover, sustainability-driven entrepreneurs, similar to other innovative entrepreneurs (Aldrich & Ruef, 2006), share reliable and trustworthy information among consumers to enhance the level of trust and create reliable ties. With this strategy, they attempt to introduce their new practices, convince other actors, and gain cognitive legitimacy. A growing legitimacy of these new trends and a higher level of trust among actors, institutionalizes the new norms and facilitate the diffusion of information across the system.

Exploring the above-mentioned argument, the findings in this research clarify that learning occurs along different dimensions that could be classified into technical learning and sociopolitical learning (Schot & Geels, 2007; Smith, 2007). This research argues that learning for innovative approaches with more objective outcomes such as technology is more evidence based and centered on tangible outcomes, while for more socially driven practices such as fair trade and ethical consumption, learning happens through negotiation among a diverse range of actors with a variety of worldviews. In the latter, collective meanings emerge when different actor groups in these negotiations reach an agreement and create a common vision. The emerging meanings and visions may vary based on local norms and cooperating groups. Hence, sustainability-driven entrepreneurs with socially inclined objectives, as one actor among many in these debates, have a lower level of influence on learning processes. Yet, for more technological trends, a sensible and tangible outcome and more accountable feedback, received from external institutional fields, allow sustainability-driven entrepreneurs to enjoy a greater degree of influence

over their business environment and create broader systemic changes in their socio-technical system as individuals. In this context, it is important to remember the degree of subjectivity or objectivity for new organizational forms is fuzzy, and varies across institutional dimensions such as cognitive norms, regulation, or technology. This diversity is associated with the nature of entrepreneurial opportunities.

The other findings that highlight the entrepreneurial roles in wider systemic changes in their socio-technical system is role modeling. Sustainability-driven entrepreneurs facilitate double-loop learning among skeptical actors by offering observable and accountable outcomes (Kemp et al., 1998; Kivisaari et al., 2004; Ratinen & Lund, 2016). The social and environmental objectives of new trends may create a competitive advantage that assists the process of evaluation among those actors (Geels & Raven, 2006). The findings show that sustainability-driven entrepreneurs with their new organizational forms introduce alternative organizational logics to dominant norms and institutions in their socio-technical systems. Their successful practices send positive feedback to dominant actors that their new arrangements address the selection criteria in their local settings. With this positive feedback, dominant actors start to reevaluate their assumptions and may consider such practices as legitimate, leading to a shift in dominant institutional fields. The findings in this thesis, confirming handful of research in sustainability-driven entrepreneurship (Choi & Gray, 2008b; Walton & Kirkwood, 2013), clarify that sustainability-driven entrepreneurs want to be identified as practical examples of their actions. They use every opportunity to act as role-models for other actors in their sociotechnical systems. This strategy portrays a different approach compared to conventional entrepreneurs, who are usually focused on their own success and use their unique characteristics as their competitive advantage.

Finally, the findings in this research suggest that the density and quality of the above-mentioned strategies vary for different actor groups. This initiates from the degree and nature of uncertainties that these actors experience with regards to new practices (such as novel procedures or new markets). It seems that sustainability-driven entrepreneurs employ more proactive strategies towards the actors who experience the highest level of uncertainties. Depending on targeted actors, sustainability-driven entrepreneurs can create an environment for debate and consensus-making, gain cognitive legitimacy, and facilitate the imitation process for late movers. In summary, this research argues that:

Sustainability-driven entrepreneurs, like other innovative entrepreneurs, use different strategies such as system building, institutional entrepreneurship, collective engagement, and trust building to enhance their cognitive and sociopolitical legitimacy. Yet, extending the current literature, strategies such as information sharing among likeminded businesses and role modeling for skeptical actors differentiate these entrepreneurs from conventional counterparts. Moreover, it seems that sustainability-driven entrepreneurs with innovative approach inclined towards technological aspects, compared to the ones inclined towards social dimensions, could play a more significant role in wider systemic changes in their socio-technical systems as individuals.

7.5.4 Fourth Contribution: Mediating Factors of Socio-technical Context and Nature of the Innovative Approach

The previous sections explained how wider influence of sustainability-driven entrepreneurship is a result of a dynamic process between internal and external legitimacy that occurs through transition cycles. They discussed how sustainability-driven entrepreneurs may employ variety of strategies to enhance the validity of their new practices in these dimensions. Yet, the findings in this thesis suggest that different socioeconomic factors may influence the success and failure of their actions. Criteria such as (1) nature of the innovative approach, and (2) socio-technical context mediate the influence and effectiveness of entrepreneurial strategies in wider systemic changes in their socio-technical systems.

Sustainability-driven entrepreneurs may locate market failures in current socio-technical regimes and design new organizational forms to address those inefficiencies or they may create sustainable opportunities by adopting new philosophies that question the fundamental trends in those systems (Alvarez & Barney, 2007; Pastakia, 1998; Schumpeter, 1934). While both opportunities may address social and environmental degradation, the quality of change varies between the two. In the first case, it usually challenges the patterns and procedures at the regime level, while in the latter entrepreneurial actions challenge system structures and mental models (Senge, 2006). The findings in this research suggest that while both types of changes require learning to create legitimate organizational forms and persuade other stakeholders, changing system structures and mental models requires additional effort and imposes a higher risk on

entrepreneurial success. A considerable amount of feedback is expected by a variety of stakeholders to accept a new approach as a legitimate alternative for their taken for granted assumptions. Hence, this research argues that nature of sustainable opportunities influences the success and failure of entrepreneurial actions for wider systemic changes in their socio-technical systems. Future research has to redefine opportunity recognition and exploitation to incorporate multidimensionality of sustainable innovations in a coherent whole and consider all aspects of human life that is embedded in the natural environment. This definition should consider the variations associated with different local settings and contextualize entrepreneurial actions in their socio-technical landscape.

Considering the above-mentioned discussion, exploitation of sustainable opportunities may create variations along different institutional logics in socio-technical regimes. Institutional logics include, but not restricted to, technology, family, community, religion, profession, state, corporations, and market (Fuenfschilling & Truffer, 2014). Depending on the dimensions of a departure, local settings, and sensitivity of norms reactions of actors to new trends may vary. An innovative approach that has major departures in multiple dimensions imposes a higher risk on entrepreneurial actions in terms of gaining legitimacy and finding access to scarce resources. Moreover, departures from some of the norms (such as religion and the state) may raise serious resistance among salient actors to entrepreneurial actions. The findings in this research suggest that entrepreneurial practices that are less sensitive to cultural and social norms increase the level of influence that entrepreneurs may play in wider systemic changes in their socio-technical systems as individuals, while innovative practices that require significant change in social institutions (such as families and communities) may face serious obstacles to find legitimacy and alter the dominant trends at the regime level. Hence, sustainability-driven entrepreneurs who have departures in the latter institutional fields may need other support such as help from governing bodies in the form of policies to change the trends in their favor.

In this regard, trends of change at the landscape level may play a double edge sword. On the one hand, consistency of new practices of sustainability-driven entrepreneurs with broader trends at the landscape level facilitates the acceptancy of entrepreneurial actions. These broader trends may destabilize current norms and institutions at the regime level and create windows of opportunity for new practices of entrepreneurs. For example, the findings in this thesis show that a raising awareness among consumers in

recent years has questioned the fundamental assumptions in current regimes in the retail sector and encouraged actors to search for legitimate alternatives for their purchasing habits. On the other hand, inconsistency of broader trends to entrepreneurial actions at the landscape level may create lock-in in the status-que. For example, policies in support of dominant norms and institutions may stabilize these trends and hamper the legitimization process for new practices of sustainability-driven entrepreneurs that question those fundamental assumptions. Considering these wider trends at the landscape level will help sustainability driven entrepreneurs to employ more productive strategies for success. Moreover, guiding those trends into particular directions by actors such as policy makers and social media may change the selection criteria in favor of new trends and facilitate more bottom-up changes from actors such as entrepreneurs. Further research on this topic is required to clarify how different actors may play roles in this regard and how their actions may change the trends in the broader context.

Furthermore, the findings suggest that other factors such as complexity of socio-technical systems and level of trust among actors in those systems may change the effectiveness of entrepreneurial actions. It seems that wider influence of entrepreneurial actions have a negative correlation with the degree of complexity in socio-technical systems. The findings show that building networks and creating institutional support in socio-technical systems with a diversity of ties and complex dependencies to other systems is a challenging task. While complex socio-technical systems with diversity may create a more fruitful environment for inducing variations, establishing new networks and changing norms among a wider range of stakeholders impose a higher risk on entrepreneurial success. It seems that complex socio-technical systems have stronger tendencies to maintain their inertia towards current norms and altering these trends demands a significant effort and urges more collective enactments. This research argues that innovative activities that take place in isolated, less complex socio-technical systems, may offer sustainability-driven entrepreneurs a higher level of control over their actions. This notion creates further opportunities for entrepreneurs to employ proactive strategies for change at the system level.

Align with the previous argument, the findings show that stronger social ties among actors and a higher level of trust in socio-technical systems nurture a more fruitful environment for wider influence of entrepreneurial actions. It seems that stronger ties and a higher

level of trust facilitate information sharing and hasten the diffusion of information. As discussed before, strategies such as third party certifications and emphasizing on transparent business activities are adopted by sustainability-driven entrepreneurs to enhance the level of trust in their relationships with other actors. Hence, this research argues that sustainability-driven entrepreneurs may play a more significant role in wider systemic changes of socio-technical systems if actors in those systems have stronger ties with each other and trustworthy relationships among those actors facilitate information sharing. In summary, this research extends the previous literature and argues that:

> ***Wider influences of entrepreneurial actions are dependent to complexity of sociotechnical systems and level of trust among actors. Sustainability-driven entrepreneurs are more effective in socio-technical systems with less complexity, higher level of trust, and stronger ties among actors. Effectiveness of their roles is mediated by nature of entrepreneurial opportunities, as locative and creative, that is dependent to institutions and norms in their local settings.***

7.6 CONCLUSION

This chapter discussed the findings through the theoretical lens in this thesis that is a new combination of Evolutionary Theory of Organizational Change and Sustainability Transition. The chapter highlighted a model (Figure 7-3), abstracted from this combination, as one of the contribution, and further discussed how the findings in this research confirmed, revised, and/or extended the literature in relevant areas. The model introduced an iterative process that occurs through transition cycles and described that wider influence of entrepreneurial actions is an interplay between internal and external legitimacy of new organizational forms. Influenced by complexity of the sustainability concept and iterative process in transition cycles, the thesis argued that sustainability-driven entrepreneurship is a hybrid phenomenon. It showed that sustainability-driven entrepreneurs may move between various institutional logics at different stages of development to maintain their viability, while pursuing their sustainability objectives. The thesis proposed that further research on this topic is required to clarify how sustainability-driven entrepreneurs make decisions and compromise between their multidimensional

goals to address institutional constraints and at the same time pursue their social and environmental objectives. During this process sustainability-driven entrepreneurs may revise and redefine their goals based on feedback from their business environment, while they may also employ proactive strategies to change the dominant norms and institutions at the regime level in favor of their new practices.

The thesis showed that wider influence of sustainability-driven entrepreneurs as individuals is dependent on the nature of entrepreneurial opportunities exploited by sustainability-driven entrepreneurs. Exploitation of opportunities that have major departures from norms and institutions in their local settings may leave entrepreneurs with fewer strategic choices and a lower level of influence for systemic changes in their socio-technical systems. This argument highlighted the multidimensionality of sustainable opportunities that include all aspects of human life including economic dimensions. Hence, as one of the main contributions the thesis suggested that future research has to redefine sustainable opportunities and move from simplified dyadic logic of sustainability against profitability. Future definitions have to consider the complexities associated with sustainable opportunities that include all aspects of human life, embedding them in the natural environment. The thesis clarified that these definitions have to include the variations in local settings as meanings can be subjective and interpretations of actors may change based on social and cultural characteristics of each particular situation.

The thesis showed that sustainability-driven entrepreneurs, similar to all innovative entrepreneurs, are one of the main sources of variations that their actions may trigger wider changes in socio-technical systems. Similar to all entrepreneurs, they learn and create valid organizational forms for their new practices. Yet, the thesis clarified that this learning process is influenced by emotional attachments and biased decisions of sustainability-driven entrepreneurs based on their social and environmental values. The thesis suggested that future research needs to investigate how personal intentions of sustainability-driven entrepreneurs is different from other entrepreneurs and how these variations may alter the learning processes for sustainability-driven entrepreneurs. Influenced by the iterative process of transition cycles and hybrid nature of sustainability-driven entrepreneurship, wider effect of such entrepreneurial actions is dependent on how newly created organizational forms find external legitimacy among wider actors in their socio-technical systems. The thesis discussed that sustainability-driven

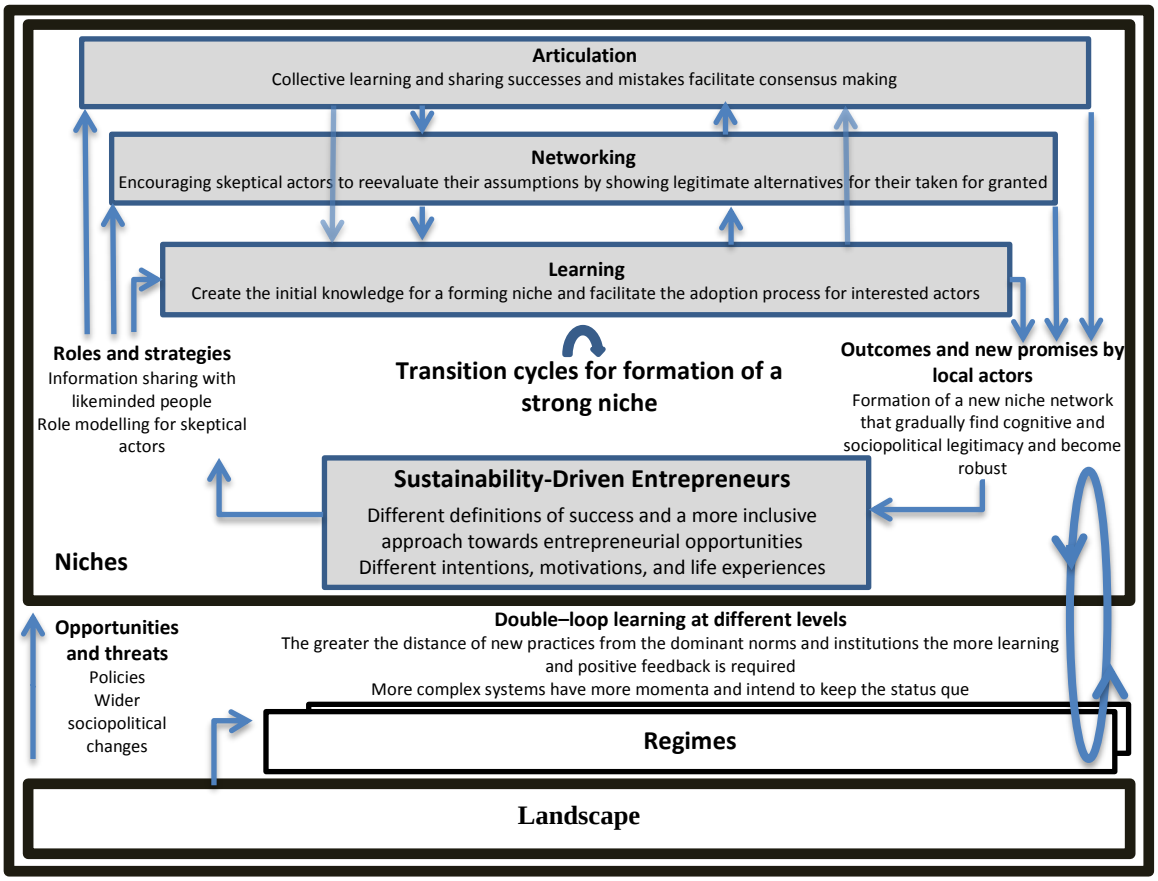
entrepreneurs may employ proactive strategies to enhance their cognitive and sociopolitical legitimacy among those actors.

The discussion on the findings showed that most of the strategies, used by sustainability-driven entrepreneurs for legitimacy making, are similar to the ones that have previously discussed in entrepreneurship literature for innovative entrepreneurs. Strategies such as information sharing and transparency as a marketing strategy, third party certifications for legitimacy making and enhancing trust, cooperative marketing for a wider access to market, and collective actions to leveraging the level of influence have been topics of research in the previous literature. Yet, the thesis highlighted some new insight that were unique for sustainability-driven entrepreneurs. The discussion showed that sustainability-driven entrepreneurs are very willing to share information with likeminded businesses. The thesis argued that the quality of this information sharing is unique among sustainability-driven entrepreneurs. Compared to their counterparts that use different strategies such as trade secrets, trademarks, copyrights and patent to protect their organizational knowledge, sustainability-driven entrepreneurs are very willing to share their knowledge and networks with actors who are interested in the same types of activities. Moreover, the thesis suggested that sustainability-driven entrepreneurs also want to be identified as practical example of their new organizational forms and role model for skeptical actors. Sustainability-driven entrepreneurs defined this role as one of their main objectives. They tried to leverage their claim by highlighting their successes and offering better quality products. The chapter further discussed how the complexity of socio-technical systems and level of trust may influence the effectiveness of abovementioned strategies.

The thesis suggested that complex socio-technical systems with multiple connections with other systems have greater inertia, which encourage actors in those systems to keep the status que and act based on dominant trends and norms. The discussions in the chapter clarified that changing these trends demands further effort from entrepreneurs and considerable amount of feedback should be experienced by salient actors in such systems to reevaluate their taken for granted assumptions and consider new practices as legitimate alternatives for their current actions. The thesis proposed that in these situations wider changes at the landscape level may create windows of opportunities for new trends and change the selection criteria in their favor. Future research needs to clarify

how different actors play roles in this regard and how their actions can change the trends in the landscape level to encourage entrepreneurial opportunities and create a greater chance for bottom-up changes. Moreover, the chapter highlighted that higher level of trust among actors in socio-technical systems facilitate information sharing and may offer more fruitful context for legitimate organizational forms, created by sustainability-driven entrepreneurs, to become wide spread and create broader changes in the norms and institutions at the regime level. The above-mentioned discussions are abstracted in Figure 7-4.

Figure 7-4 The highlights of contributions regarding sustainability-driven entrepreneurs' roles in wider systemic changes in their socio-technical systems



In summary, the discussion in this chapter suggests that sustainability-driven entrepreneurship is not a different phenomenon from other entrepreneurship practices. Indeed, the results show that some modifications to previous literature broadening the definitions for entrepreneurial opportunities and considering more inclusive outcomes for entrepreneurial actions may address the requirements to explain this phenomenon. Yet, it seems that future research needs to investigate how sustainability-driven entrepreneurs are different in intentions, motivations, and life experiences to explain why

they define broader goals for their actions, while norms and institutions are against their actions and how these factors influence their decision making during the process of business development. The following chapter concludes the thesis by reviewing the previous chapters and describing how these findings address the research questions in this thesis.

Chapter 8 *CONCLUSION*

In a gentle way, you can shake the world (Gandhi)

This chapter concludes the thesis by overviewing the previous discussions. It shows how the research started, was executed, and conclusions were made. Moreover, it reflects on limitations and looks forward to fruitful avenues for future research. The chapter ends by highlighting the implications of the findings for future research and practices.

8.1 Overview of the Study

The study began with justification of the research problem and main objectives of the research in Chapter One. It was explained how complexities of social and environmental degradation, resulted from industrial revolution and fast economic growth, need urgent attention. The chapter clarified that business players, and among them entrepreneurs as one of the main drivers for economic growth, can address such complexities. It was discussed that outcomes of entrepreneurial actions have expanded to social and environmental dimensions and actors such as social entrepreneurs, environmental entrepreneurs, and finally sustainability-driven entrepreneurs are among the people who commence their business practices to address issues related to social and environmental degradation.

The study continued by a review of sustainability-driven entrepreneurship literature in Chapter Two. The chapter investigated the extant knowledge in this area and highlighted different outlooks towards this phenomenon. It showed that while sustainability-driven entrepreneurship is often considered as a solution for current social and environmental issues, literature does not pay enough attention to the process of entrepreneurial actions and how outcomes of sustainability-driven entrepreneurship may address those problems. It was indicated that the two extreme views towards entrepreneurs as adoptive and rational actors do not reflect an accurate picture of these situations. Rather, the analysis exposed that a more sociological approach, considering sustainability-driven entrepreneurs as bounded rationales who are constrained by environmental factors and make strategic decisions based on available resources, may reflect more realistic results. Hence, further contextualized research is required. Three research questions were defined based on this analysis that are:

1. What are the roles and strategies sustainability-driven entrepreneurs use to facilitate wider systemic changes?

2. What are the main interactions between sustainability-driven entrepreneurs and other actors?
3. What are the key factors that influence sustainability-driven entrepreneurs' actions for systemic changes?

It was shown that Sustainability Transition literature, as a systemic perspective for investigation of socio-technical systems, offers an appropriate framework for such contextualization. In the third chapter, frameworks in Sustainability Transition were investigated and an appropriate theoretical lens was carefully chosen to explain the findings in this research and create a better understanding about the above-mentioned research questions. It was shown that, based on the Multi-Level Perspective, socio-technical systems can be conceptualized at three levels of (1) niche, (2) regime, and (3) landscape, and transitions, which are defined as long term fundamental changes that co-evolve along various dimensions of these systems, can be explained by investigating the dynamics among these layers. Regimes were conceptualized as stabilized networks among incumbent actors with institutionalized norms and trends, while niches were described as networks of actors where an innovative approach emerges. It was shown that initially niches are unstable; however, they may stabilize and become robust. This process of stabilization occurs in transition cycles that take place through activities that can be categorized as learning, networking, and articulation. Finally, the landscape layer, above and beyond the reach of the niche and regime layers, is structured and stable, with variations occurring only in long timeframes. Sustainability-driven entrepreneurs have been highlighted as one of the most influential actors for creation of a robust niche. Considering these characteristics among different frameworks in Sustainability Transition, a combination of Strategic Niche Management and Multi-Level Perspective was chosen as the most appropriate framework for contextualization of entrepreneurial actions in this research.

It was shown that, while Sustainability Transition offers an appropriate systemic approach to contextualize entrepreneurial actions and the process of niche development, it did not offer the requirements to explain the interactions among actors at the niche level. Hence, Evolutionary Theory of Organizational Change was selected to address this shortcoming. Evolutionary Theory specifically investigates how new forms of organizations emerge and how interactions among actors create cognitive and sociopolitical legitimacy that

eventually may result in development of new populations and communities of organizations. The combination of the Multi-Level Perspective, Strategic Niche Management, and Evolutionary Theory of Organizational Change resulted in a new model that explained how entrepreneurs may create new organizational forms and interact with other actors to develop their networks at the niche level. The model described how these new forms of organizations may find cognitive and sociopolitical legitimacy to form a robust niche, which eventually may institutionalize and translate to regimes at the system level. The model proposed an iterative process that occurs through transition cycles to explain these dynamics.

To find access to appropriate data for this thesis, two embedded case studies in two different socio-technical systems (the retail sector and the wine industry in New Zealand) were selected. The sustainability-driven entrepreneurs, as units of analysis, were chosen based on purposeful sampling considering the criteria that emerged from the analysis in Chapters Two and Three. The selection of cases was based on the importance of socio-technical systems; the wine industry, consisting of agricultural and industrial processes represents a complex socio-technical system that has been a topic of research for issues such as usage of chemicals and ineffective energy consumption; while the retail sector is a socio-technical system relevant to most other sectors where any alterations may initiate wider changes in connected systems of production and consumption. Moreover, the combination of the two case studies created the opportunity for cross-case comparison, which offered a better understanding of sustainability-driven entrepreneurs with different priorities for social and environmental dimensions. The findings were presented in two chapters.

Chapter Five and Chapter Six presented the findings from the retail sector and the wine industry, respectively. Both chapters began by describing the characteristics of the associated socio-technical systems and dominant regimes and discussed how current trends and practices have resulted in different social and environmental problems. Then a detailed description of participants in the case studies was presented. Led by the proposed model in this thesis and the literature in Sustainability Transition as the overarching framework, data were presented in four main categories as background and intention of nascent entrepreneurs, main roles and strategies for forming a robust niche, key influential socio-economic factors, and actor groups.

Finally, in Chapter Seven the findings in the previous discussions were explained via the theoretical lens in this thesis to present an abstract model of entrepreneurial actions in sustainability transitions and highlight the contributions to the literature of sustainability-driven entrepreneurship. Moreover, in this chapter a cross case comparison was conducted that clarified the differences between roles and strategies of sustainability-driven entrepreneurs with different priorities for social and environmental objectives. The chapter showed how these findings may conform, revise, and/or extend the extant literature in relevant topics. The findings in this research contribute to the literature with the following arguments:

First, the thesis proposes a new model of niche development and niche-regime translation that focuses on entrepreneurial roles and strategies. It suggests that sustainability-driven entrepreneurship is a dynamic process where sustainability-driven entrepreneurs are simultaneously involved in different institutional fields, within and outside their businesses, to develop their legitimate organizational forms. The research argues that to generate a better understanding of this process both internal and external sources of legitimacy should be considered in investigations and future research has to contextualize entrepreneurial actions in their landscape environment.

Second, the research shows that sustainability-driven entrepreneurs are one of the main drivers for creation of variations in socio-technical systems. It argues that sustainability-driven entrepreneurs, like most innovative entrepreneurs, are passionate individuals with strong beliefs in their new approaches. They follow different institutional logics, compared to dominant norms in their socio-technical systems, which results in new organizational forms with different performance criteria. The thesis shows that sustainability-driven entrepreneurs have broader definitions for success. Hence, their interpretations of entrepreneurial opportunities are more inclusive that embrace various aspects of human life. The thesis clarifies that sustainability-driven entrepreneurs may reevaluate their values during transition cycles and/or make strategic decisions to change the norms and institutions in their business environment. Hence, sustainability-driven entrepreneurship was described as a hybrid phenomenon where associated business models may move between complying with dominant norms (to maintain their viability) and taking opposing positions (to pursue their sustainability objectives). The research demonstrates that these dynamics are affected by emotional attachment of sustainability-

driven entrepreneurs and their previous life experiences. Future research needs to clarify how these personal characteristics may influence entrepreneurial learning and how sustainability-driven entrepreneurs make decisions and move across various institutional fields, compromising their goals while still pursuing their social and environmental objectives.

Third, the research shows that sustainability-driven entrepreneurs, whenever possible, may make strategic decisions to change their business environment and form a new niche. This process may initiate wider systemic changes in their socio-technical system. The research argues that sustainability-driven entrepreneurs may act as system builders and institutional entrepreneurs. They develop the initial knowledge for their forming networks and share it with other actors. Sustainability-driven entrepreneurs play a crucial role in collective learning and consensus making. Furthermore, they act as role-models for skeptical actors, developing legitimate organizational forms that follow different institutional logic to the dominant norms and institutions. The discussion on the findings showed that successful practices of sustainability-driven entrepreneurs with measurable performance criteria encourage local actors to reevaluate their taken-for-granted assumptions and adopt new practices as a legitimate alternative for their previous choices. The thesis clarified that most of these roles and strategies have been discussed in previous research and highlighted information sharing with likeminded actors and role modelling for skeptical actors as unique for sustainability-driven entrepreneurs.

Forth, the research argues that even though sustainability-driven entrepreneurs play a crucial role in development of new organizational forms and make strategic decisions to gain cognitive and sociopolitical legitimacy, the influence of their actions is mediated by criteria such as nature of their innovative approach and contextual conditions of their socio-technical system. The findings demonstrate that types of entrepreneurial opportunities; degree and dimensions of departures from current norms sand practices, and their added value for salient stakeholders change the level of risk for success and failure of entrepreneurial actions and influence the effectiveness of their strategies on wider systemic changes in their business environment. Furthermore, factors such as complexities of socio-technical systems, level of trust among actors in those systems, and wider trends of change at the landscape level may mediate the abovementioned factors. The thesis discussed that entrepreneurial strategies are less effective when their socio-

technical systems are complex and the level of trust among actors is low. The thesis argues that broader changes at the landscape level may create windows of opportunity and facilitate a breakthrough of entrepreneurial actions to overcome these obstacles. Future research needs to investigate how powerful actors may play roles in this regard and how their actions may alter the trends in a broader context at the landscape level in favor of entrepreneurial actions.

The abovementioned findings address the research questions in this thesis, which are summarized in the following statements

What are the roles and strategies sustainability-driven entrepreneurs use to facilitate wider systemic changes?

> Sustainability-driven entrepreneurs, like all innovative entrepreneurs, are sources of variations in their socio-technical systems. They Create hybrid business models and whenever resources are available use strategies to find cognitive and sociopolitical legitimacy. Most of these strategies are alike to the ones used by conventional entrepreneurs. However, information sharing with likeminded businesses and role modeling for skeptical actors are particularly unique for these entrepreneurs.

What are the main interactions between sustainability-driven entrepreneurs and other actors?

> Sustainability-driven entrepreneurs are more proactive towards salient actors, who experience the highest level of uncertainty with regards to their new practices. They may benefit from creating connections with actors associated with more legitimate trends in their business environment such as churches, universities, and governmental institutions. These connections help them in the process of legitimacy making, connecting them to more validate trends in their business environment. This has a higher importance for sustainability-driven entrepreneurs, who have priorities for social dimensions.

What are the key factors that influence sustainability-driven entrepreneurs' actions for systemic changes?

Sustainability-driven entrepreneurs play a more effective role in wider systemic changes when their socio-technical systems are not complex and level of trust among actors is higher. Broader changes at the landscape level, such as change in policies or raising awareness among consumers, play a double edge sword and may create opportunities and threat. These factors should be considered in decision making by entrepreneurs and other influential actors to facilitate broader changes towards sustainability.

The abovementioned arguments shed light on different aspects of the sustainability-driven entrepreneurship process and contribute to the literature in this area. Yet, the thesis has some limitations that may influence these outcomes and should be considered in implications of the results. These limitations offer some fruitful topics for future research that is further discussed in the following section.

8.2 Limitations and Suggestions for Further Research

Limitations of the research method and theoretical framework in this thesis were investigated and explained in Chapter Three and Chapter Four. However, it is important to identify and explain the limitation of this thesis that has contributed to our understanding of sustainability-driven entrepreneurship and processes in sustainability transitions. By far the first and for most important limitation in this research is the timeframe of the collected data in this thesis, compared to the time horizon of transitions in socio-technical systems. This research represents a snapshot of these long term fundamental changes that take place along different dimensions of those systems. Hence more longitudinal research may result in a better understanding of entrepreneurial actions. A more longitudinal research would show how sustainability-driven entrepreneurs may change strategies at different stages of evolution. Moreover, long term research may separate successful and unsuccessful practices of entrepreneurs and clarify why some innovative practices may not translate to dominant regimes, or how those practices may lose their inertia in the process of development and evolve to other forms. Hence, considering more longitudinal research and investigating both successful and unsuccessful models may result in a more in-depth understanding of this phenomena.

Considering the abovementioned argument, the other restriction in the process of data collection is the small number of entrepreneurs in the case studies. While the thesis has

presented a comprehensive picture of the situations under investigations, a bigger number of interviews would add to the details in this thesis and offer a more fruitful context for cross case comparisons. With this restriction, the findings are related to local situations and subjective to characteristics of people involved in those circumstances, hence generalizability is not applicable. This is also influenced by another restriction in the process of data collection. Since, some of the Other Participants (OP), in some situations, have talked about sustainability-driven entrepreneurs in general and not particularly the entrepreneurs in the case studies, their arguments may not necessarily applicable for the entrepreneurs in the two case studies in this thesis. Future research has to consider research with bigger numbers, in various contexts, and use different sources of information for triangulation. Indeed, these types of research may require access to extensive resources such as time and financial support. In this regards, the unique personality of entrepreneurs and individual motivations and intentions of these people may add to the subjectivity of the findings. As discussed in Chapter Seven future research has to investigate how entrepreneurial intentions and life experiences of sustainability-driven entrepreneurs are different and how these characteristics influence the learning process among these people. Since, these personal traits are subjective to environmental factors future research has to explain how these entrepreneurs are influenced by those conditions.

Another restriction that influences the findings in this thesis is simplifying assumptions. Due to the restriction in resource and time, this research has focused on specific sustainability-driven entrepreneurs in one industry or sector representing their wider socio-technical systems. The thesis, by assumption, has considered the regimes as a homogenous and coherent unit, which is a simplified version of the situations under investigation. Hence this thesis has not considered the dynamics among possible alternatives that may affect the process of change. For example, the dynamic among different types of entrepreneurial actions that may create a competitive or cooperative environment among different niches and may result in new dynamics, or interactions among multiple regimes that might be available in some socio-technical systems. This thesis does not consider how these dynamics may stabilize or destabilize current dominant systems or create windows of opportunities for new niches. More research is required to create a better understanding of dynamics among niches and regimes that share the same market, or use the same resources.

Although the findings in this research may be restricted by the abovementioned factors, the outcomes and new insight from the thesis have implications for researchers, entrepreneurs, and policy makers. These notions are further discussed in the following section.

8.3 IMPLICATIONS

The findings in this research about sustainability-driven entrepreneurship and entrepreneurial roles in socio-technical transitions reveal new insight and provide some suggestions for researchers and practitioners.

8.3.1 IMPLICATIONS FOR RESEARCH

First, this research adopted a sociological approach, considering sustainability-driven entrepreneurs as part of their wider context, and examined their roles in the process of sustainability-driven entrepreneurship. As one of the main arguments, the findings show that in order to understand this process, the evolution of new organizational forms should be considered co-evolving with their surrounding environment. Sustainability-driven entrepreneurs as the main drivers within their organizations play a major role in development of new forms; however, their success or failure is dependent on external sources of legitimacy that create opportunities and threats for their actions. Previous research has focused either on internal aspects of entrepreneurial organizations (Belz & Binder, 2017; Choi & Gray, 2008b; Parrish, 2010; Walton & Kirkwood, 2013) or on specific interactions with external actors (Dean & McMullen, 2007; Pacheco et al., 2010; Pinkse & Groot, 2015). Hence, this research proposes that for conceptualizing sustainability-driven entrepreneurship and for gaining a better understanding about this phenomenon, more sociological research may offer better results. Research on sustainability-driven entrepreneurs should consider the interactions between internal and external sources of legitimacy and investigate how these two coevolve during different stages of the entrepreneurial process. Comparisons between entrepreneurial actions in different contextual conditions may elaborate how external sources of legitimacy can influence the entrepreneurial process.

Second, the new insight from this research propose that sustainability-driven entrepreneurship is a hybrid phenomenon where variations in new organizational forms

may take place along different dimensions and institutional fields, all of which may change during the course of development. However, previous literature has adopted a simplified paradigm dividing sustainability-driven entrepreneurs into profit-seeking individuals and values-driven actors, and defined the sustainability logic against economic norms (Cohen & Winn, 2007; Dean & McMullen, 2007; Parrish, 2008). The multifaceted nature of sustainability and its dependence on different economic, cultural, social, and even religious norms suggests that research needs to reconsider the complexities associated with this concept. Sustainability innovations may have departures in each or a combination of these dimensions, which may result in different categories of obstacles for entrepreneurial actions and may address different aspects of social and environmental problems. Hence, taking a broader perspective towards sustainability-driven entrepreneurship and its definition, considering the complexities associated with sustainability, may better present the situations and result in more fruitful insights.

Third, as it can be concluded from the arguments in this research, sustainability-driven entrepreneurship is linked to institutional change. Sustainability-driven entrepreneurs are constantly dealing with institutional conflicts between their sustainability-oriented values and dominant institutional norms. However, it seems that extant literature in sustainability-driven entrepreneurship, except a handful of research (Pacheco et al., 2010; Pinkse & Groot, 2015), does not consider the interdependencies between entrepreneurship actions necessary for creation of a viable business venture and institutional work required to find cognitive and sociopolitical legitimacy. The findings in this research highlight the interplay between institutional conflict resolution and legitimization process and describe sustainability-driven entrepreneurs as actors who are constantly involved in both activities. A bridge between the literature in institutional entrepreneurship and sustainability-driven entrepreneurship may create a fruitful area of research. Combining these two fields may shed light on complexities in entrepreneurial process and offer a more holistic view to sustainability-driven entrepreneurship as a contested concept. The next section highlights some practice implications of the findings.

8.3.2 Implications for Practice

The findings in the research may help entrepreneurs and policy makers to make better choices that enhance bottom-up changes towards sustainability. Based on the findings in this research, sustainability-driven entrepreneurship is a hybrid and dynamic

phenomenon. Awareness of sustainability-driven entrepreneurs about these characteristics may help them to make more effective decisions at different stages of development. Sustainability-driven entrepreneurs have to consider the complexities related to various institutional logics in their socio-technical systems, and employ appropriate strategies that consider their market situation and available resources. They can conform to current norms and institutions, take opposing positions and aim to change the trends in their favor, or address specific target audiences and immune themselves to regimes level expectations.

Moreover, based on the evidence in this research, sustainability-driven entrepreneurs should be aware that their survival and wider influences are outcomes of dynamics between internal and external sources of legitimacy, where focusing on any of these dimensions and ignoring the other may increase their risk of failure. While reevaluation of their objectives based on feedback from their business environment is of a great importance, identifying salient stakeholders for external legitimacy is a crucial factor to find access to scarce resources. Hence, sustainability-driven entrepreneurs have to employ deliberate strategies to attract salient stakeholders and validate their actions among those actors. Framing their organizational forms and highlighting the added value of their new practices may facilitate the process of legitimacy making among those actors.

On the other hand, policies from powerful actors and decision makers should be in place in order to direct broader changes at the landscape level to facilitate desirable bottom-up changes towards sustainability. It seems that changing these trends is far out of the reach of entrepreneurs as individuals. If exogenous factors imposed by different characteristics of the landscape and regimes can be managed, sustainability-driven entrepreneurs would be able to make better plans to overcome their liability of newness. Hence, it is necessary to prepare the contextual conditions for entrepreneurial actions by changing the institutional arrangements in favor of new trends (Lebe et al., 2014; Silajdžić et al., 2015). A mixture of policies can be used to encourage entrepreneurial action and destabilize current trends to trigger abovementioned loops and facilitate transitions towards sustainability (Kivimaa & Kern, 2016).

8.4 Final Thoughts

This chapter summarized the thesis and presented the highlights of the findings. It discussed some restrictions and based on those restrictions offered some fruitful topics for future research. The chapter ended by presenting the implications of the research. While the thesis started to clarify how entrepreneurial roles are different for sustainability-driven entrepreneurs, the findings showed that most of their actions are aligned with conventional entrepreneurs, which have been identified in previous literature. The main difference between sustainability-driven entrepreneurs and other types of entrepreneurs is the entrepreneurs themselves and how they define sustainable entrepreneurial opportunities. They have more comprehensive definitions for success that include broader aspects of human life, which is embedded in the natural settings. Future research in entrepreneurship has to expand the horizon of entrepreneurial opportunities to include these complexities.

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Appendix 1 ***INTERVIEW SCHEDULE – FIRST TIER***

I am truly grateful for your participation in this project. I hope the findings of the project will be useful for you. The purpose of the research is to investigate how green entrepreneurs try to change their business environment through their networks. The results of the project should provide a better understanding of the strategies and change processes that are necessary to make more effective decisions.

1- May I start the interview by asking for a brief overview of your business?

Appendix Table 1 Questions related to the overview of the business		
Overview of the business	1-1	What is the history of the business? (How did you start? Where did the resources come from? When? Where? With whom? And why?)
	1-2	What are the main products or services of the business?
	1-3	What are your main social or environmental goals? And why?
	1-4	Why do you think you can address these goals through this business idea?

2- Have you tried to change anything in your business environment related to your social or environmental goals? (This includes any kind of changes which may solve an issue with regards to these goals and your business, or help you achieve your social and environmental aims. Examples of things that can be changed include institutions, technology, user practices, social norms, or aspects of your natural environment, among others.)

Appendix Table 2 Questions related to changes to the business environment		
Changes	2-1	What are the main changes you have tried to bring about with regards to your social or environmental goals? (These may include changes to institutions, technology, user practices, social norms, or aspects of your natural environment, among others.)
	2-2	What was the situation at the beginning? (i.e., the problem or situation you decided needed to be changed)
	2-3	What are the main reasons you sought these changes?
	2-4	How have these changes influenced you (or your business)?

2-1 May I know how you approached the situation (that you decided to change)?

2-1-1- What have you done about this situation? What were your strategies?

Appendix Table 3 Questions related to the strategies of the business		
Strategies	3-1	How did you try to achieve that goal?
	3-2	How did you plan (i.e., the planning process)? How did you execute the plan (How (are you executing the plan)? What was/is the process for implementing the plan?
	3-3	What resources have you used for this purpose? Where did you get them? (Time, money, network, information, ...)
	3-4	What have you changed so far?

2-1-2- Who was involved?

Appendix Table 4 Questions related to the actors involved in the strategies		
Actors	4-1	Who helped you to execute your strategy?
	4-2	How did you cooperate with other people or groups in addressing this goal?
	4-3	Who would be influenced by this action?

2-1-3- What have been the main issues or problems you faced in this process?

Appendix Table 5 Questions related to the process of strategies		
Constraints	5-1	What was the process of decision making?
	5-2	Who were the main decision makers?
	5-3	Could someone stop or block this strategy? (Who / how / why?)
	5-4	How did you influence the decision process?
	5-5	How did the decision process influence you or your strategy?

2-1-4- What have been the main issues or problems you faced in this process?

Appendix Table 6 Questions related to issues or problems in executing the strategies		
Constraints	6-1	What were the main constraints in executing your strategy?
	6-2	How did these constraints influence your strategy?
	6-3	Is there any special cultural or social characteristic with regards to this situation or the people involved in this situation which influence your strategy?

2-1-5- How would you evaluate your success?

Appendix Table 7 Questions related to evaluation of goal achievement		
Evaluation	7-1	What are the criteria which you use to evaluate your progress?
	7-2	How did you evaluate your success in implementing the strategy? (What are the criteria?)
	7-3	Did you achieve your goal?
	7-4	What will you change to be more productive or effective in this specific strategy, based on your experiences and current information?

Appendix 2 ***INTERVIEW SCHEDULE – SECOND TIER***

I am truly grateful for your participation in this project. I hope the findings of the project will be useful for you. The purpose of the research is to investigate how green entrepreneurs try to change their business environment through their networks. As one of the main contacts of the Name of the organization, which is among the leading green entrepreneurs in New Zealand, learning about your perspective would give us a better understanding about strategies for change.

3- May I start the interview by asking for a brief overview of yourself/your business/your organization?

Appendix Table 8 Questions related to an overview of the person, business, or organization		
Overview of the person/ business/ organization	1-1	What do you (yourself/your business /your organization) do?
	1-2	Please tell me about your (yourself/your business/your organization) background
	1-3	Do you (yourself/your business/your organization) have any social or environmental goals? If yes what are they and why? What is the rank of these goals compared to other goals?

4- How do you see the roles of these kinds of businesses like NAME OF THE ORGANIZATION in solving social and environmental problems?

Appendix Table 9 Questions related to changes of the business environment		
Change	2-1	How are you in contact with NAME OF THE BUSINESS?
	2-2	How do you see the roles of these kinds of businesses in solving social and environmental problems?
	2-3	Are you involved in their activities? How? Why?
	2-4	Who are the main other actors? Who would be influenced by these activities?
	2-5	How do you evaluate these roles? What are the evaluation criteria?
	2-6	Does NAME OF THE ORGANIZATION have the same roles?

5- What is your opinion about the strategies of the business?

3.1 If you were involved in the strategy:

Appendix Table 10 Questions related to the process of strategies (if you were involved)		
Strategies	3-1	What is your opinion about specific strategy of the business? What are the goals?
	3-2	What is your (yourself/your business/your organization) role in this strategy?
	3-3	How did you plan? How did you execute the plan? What was/is the process for implementing the plan?
	3-4	What resources have you used for this purpose? Where did you get them?
	3-5	How did you cooperate with other people or groups to execute this strategy?
	3-6	Who would be influenced by this action?
	3-7	What was the process of decision making? Could someone stop or block this strategy?
	3-8	Who are the people responsible for this strategy?
	3-9	What were the main constraints in executing this strategy?
	3-10	How did these constraints influence the strategy?
	3-11	Is there any special cultural or social characteristic with regards to this situation or the people involved in this situation which influence your strategy?
	3-12	What have you changed so far?
	3-13	What are the criteria which you use to evaluate your progress?
	3-14	What will you change to be more productive or effective in this specific strategy with your current information?

3.2 If you were not involved in the strategy:

Appendix Table 11 Questions related to the process of strategies (if you were not involved)		
Strategies	4-1	What is your opinion about specific strategy of the business?
	4-2	What are the effects of this strategy? Who would be influenced?
	4-3	How do you evaluate this strategy? What are the evaluation criteria?

Who are the people who may have information or other perspective to situation am I allowed to talk with them?

Appendix 3 *CONSENT FORM*

Green Entrepreneurs as Change Agents towards Sustainability: Strategies and Influential Factors

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. My participation in this project involves principally granting the researcher interviews of usually one to two hours. These interviews will be recorded and subsequently transcribed, with the transcript provided to me for my inspection, verification, and amendment before being incorporated into the research analysis. This consent form is only for participants in interviews.
4. The data (recordings and transcripts) will be destroyed at the conclusion of the project, but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;
5. This project involves an open-questioning technique. The general line of questioning is about interactions and strategies which green entrepreneurs use to change their business environment. The precise nature of the questions which will be asked has not been determined in advance, but will depend on the way in which the interview develops. In the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable, I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind;
6. Due to the nature of this research, it is highly likely that individual entrepreneurs and their firms will be identifiable, possibly even by the general public. Such individuals often intentionally seek the attention of the public as part of the process of achieving their goal of changing the socio-technical system. As such, it is anticipated that the publication of the name of the entrepreneurs and their firms would actually be desired by the participants. This would potentially include citing quotations from my interviews, with proper attribution to me as the source.

7. However, it is possible that some interviewees would prefer that their names not be released. I understand that this form gives me the option to allow publication of my name, or to require that all references to me and what I have said be anonymised as far as possible, using a pseudonym to disguise my identity and that of other individuals/companies where I indicate that is appropriate in my interview(s).
8. The results of the project will be used only for academic reasons, the researcher's PhD thesis and academic journals, practitioner magazines, and/or academic conferences; and
9. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand).

I agree to take part in this project.

....

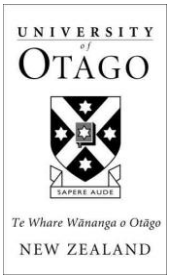
(Signature of participant) (Date)

Further, I grant permission for my name, quotations, and any other relevant details to be cited in outputs from this project, including the researcher's doctoral thesis, as well as any resulting journal articles, conference papers, newspaper reports, and other publications.

....

(Signature of participant) (Date)

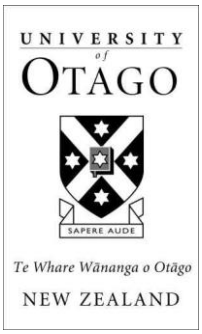
This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.



Appendix 4 *INFORMATION SHEET*

Ethics approval # 13/009

30 January 2013



Green Entrepreneurs, Change Agents towards Sustainability, Strategies and Influential Factors

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

The main goal of the project is to find out how green entrepreneurs change the business environment to make it more in tune with the concept of sustainability. This study aims to investigate the interactions between green entrepreneurs and their social and business contexts, in order to explore the strategies they may use to change the system and to examine different factors that may influence these strategies.

What Type of Participants are being sought?

The research will employ three to four in-depth case studies, involving interviews, as the primary method of data collection. Each case study focuses on one green entrepreneur, from a small or medium size business in one socio-technical system in New Zealand. The interviewees in each case will be the entrepreneur, selected employees of their company (as chosen by the entrepreneur), and necessary third parties with whom the business interacts. The case study business has to be "green" from the start of establishment. Large businesses and intrapreneurs (organisational entrepreneurs) cannot be part of this research.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to participate in in-depth interviews which will take roughly one to two hours. Because of the complex nature of the project it may be needed to have more than one session of interviews. With your permission, the interviews will be recorded and subsequently transcribed by the principal researcher. The transcript will be provided to you for your inspection, verification, and amendment before being incorporated into the research analysis. Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?

The main purpose of this research project is to collect data for the researcher's PhD dissertation; the results will therefore be included in this dissertation. According to the university's standard policy, the dissertation is available in the university library for research purposes. Further, the results of this study may be published in whole (as an academic book) or in part (in academic journals, practitioner magazines, and/or academic conferences).

Due to the nature of this research, it is highly likely that individual entrepreneurs and their firms will be identifiable, possibly even by the general public. Such individuals often intentionally seek the attention of the public as part of the process of achieving their goal of changing the socio-technical system. As such, it is anticipated that the publication of the name of the entrepreneurs and their firms would actually be desired by the participants. This would potentially include citing quotations from their interviews. Such publication could occur in academic publications (journal articles, conference papers, and book chapters) as well as in public media releases.

However, it is possible that some of the participants (particularly at the second- or third-tier in the networks of the green entrepreneurs) would prefer that their names not be released. Publication of such information will be cleared with each of the participants on an individual basis (via a signed consent form) prior to any disclosure of their details (e.g., name or company name). Where publication of the name (or company name) is not permitted, a sufficiently anonymised pseudonym will be employed to disguise the identity of the individuals/companies concerned.

This project involves an open-questioning technique. The general line of questioning is about interactions and strategies which green entrepreneurs use to change their business environment. The precise nature of the questions which will be asked has not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the University of Otago Human Ethics Committee is aware of the general areas to be explored in the interview, the Committee has not been able to review the precise questions to be used. In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

You will be informed about the general topic of the interview and possible available questions that may be asked during the interview in advance. No personal questions will be

asked, except basic demographic questions in the survey. The transcript will be provided to you for your inspection, verification, and amendment before being incorporated into the research analysis. Further, the results of the project will be provided to you on your request.

The data collected will be securely stored in such a way that only the four researchers mentioned below will be able to gain access to it. At the end of the project, any personal information will be destroyed immediately except that, as required by the university's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind. If you choose to do so any and all information relating to your participation will be destroyed.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:

Babak Zahraie (principal researcher)
Phone: 64-3-479.8126 Email: babak.zahraie@otago.ac.nz

or

Professor André Everett (primary supervisor)
Phone: 64 3 479 7371 Email: André.everett@otago.ac.nz

Dr Sara Walton (co-supervisor)
Phone: 64 3 479 5108 Email: sara.walton@otago.ac.nz

Dr Jodyanne Kirkwood (co-supervisor)
Phone: 64 3 470 3536 Email: jodyanne.kirkwood@otago.ac.nz

All at: Department of Management, University of Otago, Dunedin, New Zealand
Phone: 64 3 479 8125
Fax: 64 3 479 8173

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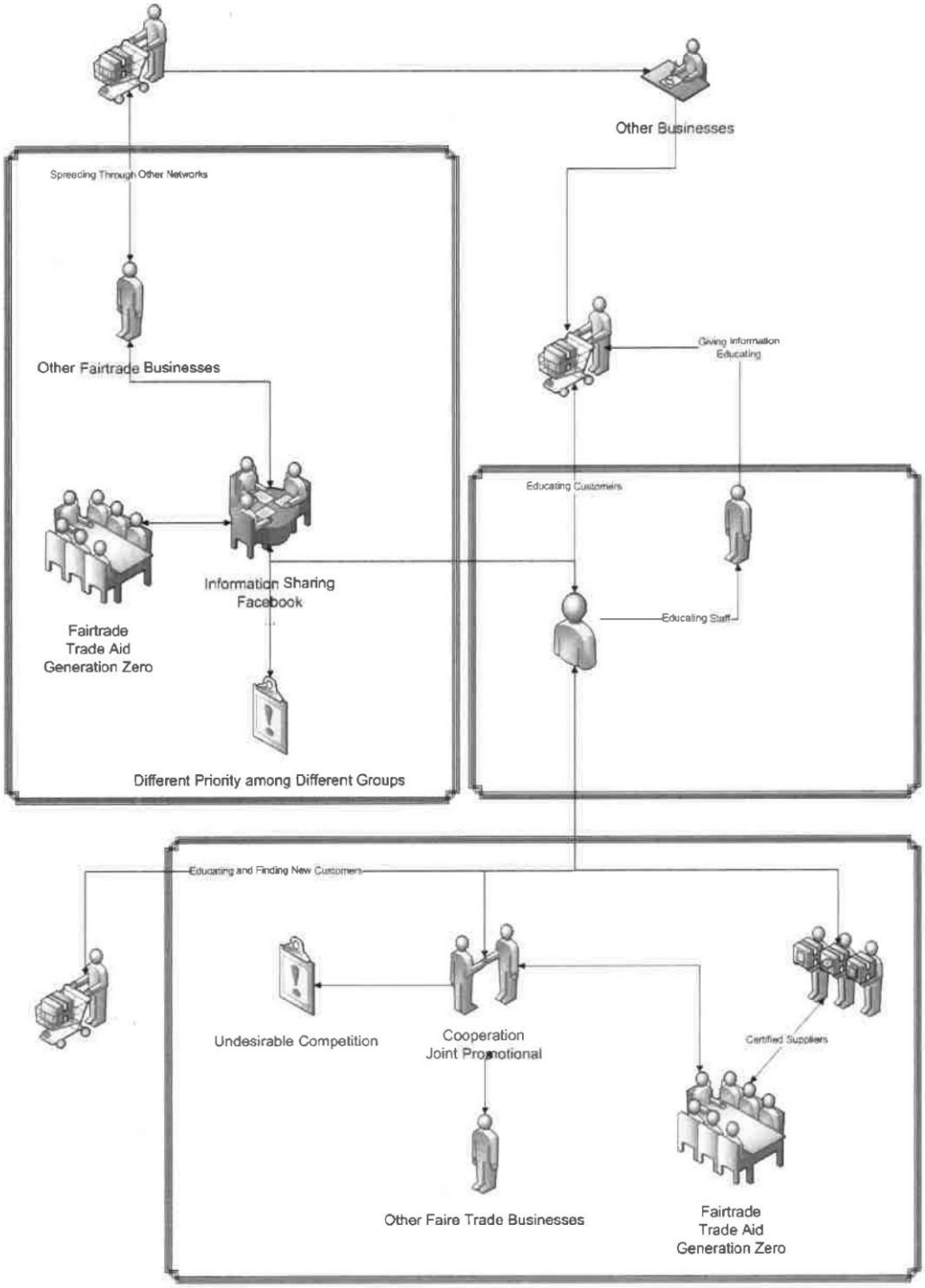
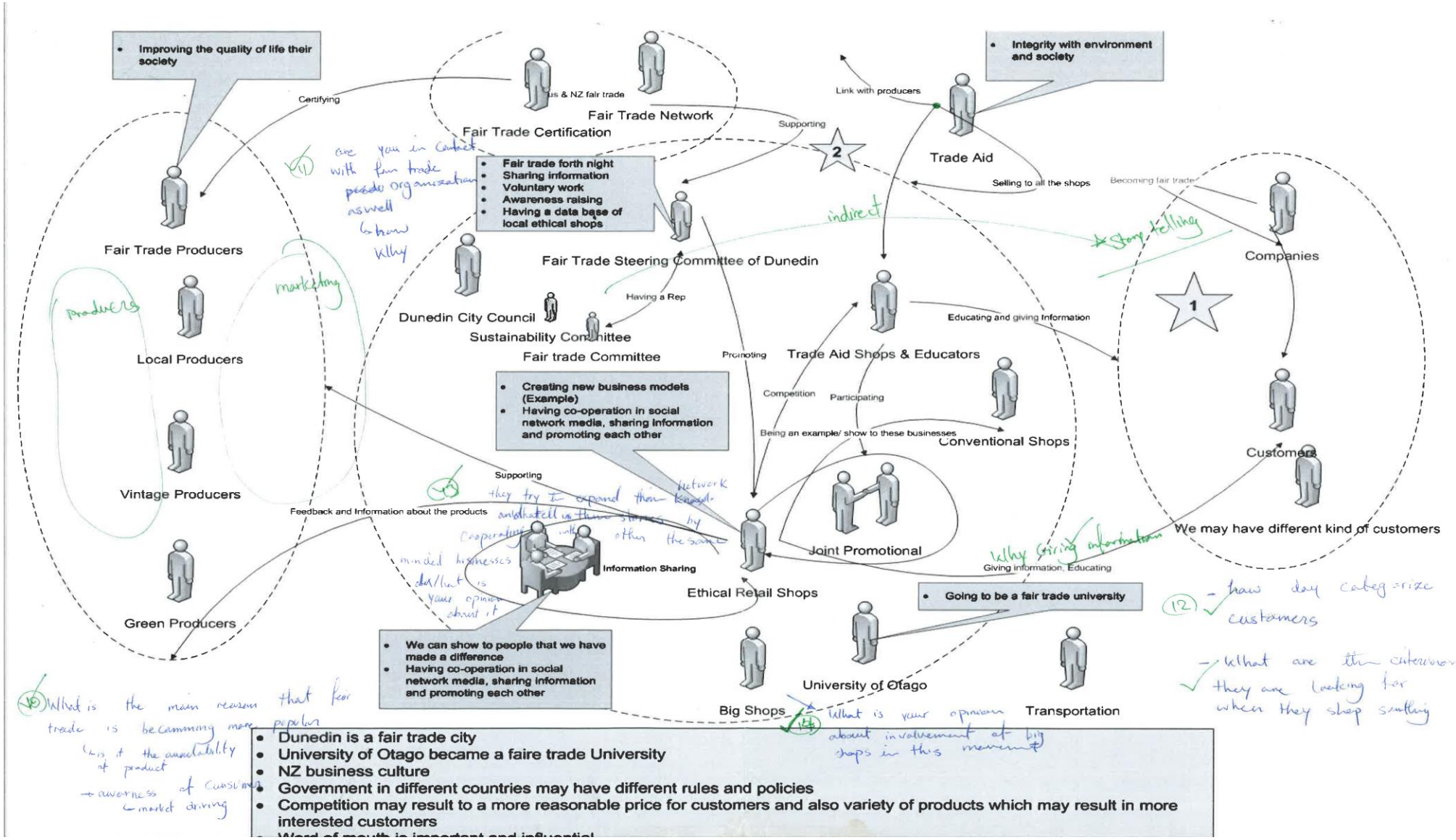
30 January 201

Appendix 5 *EXAMPLES OF RICH PICTURES*

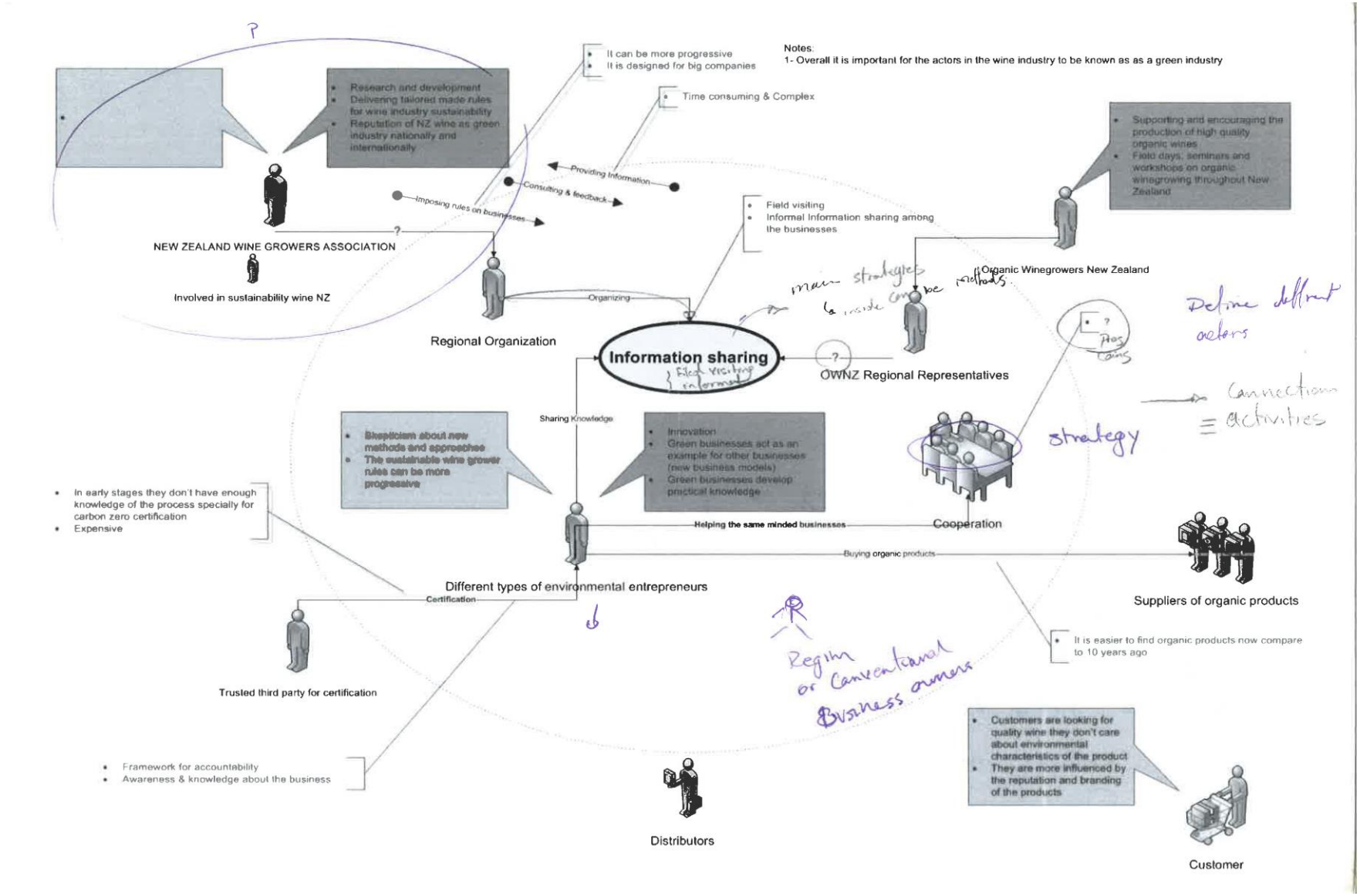
Appendix Figure 1 An example of graphical representations used in the initial interviews in Chapter Five



Appendix Figure 2 An example of graphical representations used in the final interviews in Chapter Five



Appendix Figure 3 An example of graphical representations used in the initial interviews in Chapter Six



Appendix Figure 4 An example of graphical representations used in the final interviews in Chapter Six